Dutch Oven Cooking

Helper's Guide

BUL 940

University of Idaho Extension

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Note to Project Helper

Congratulations, a young person has asked you to be his or her leader. Your role as a leader 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 the member manual.

The Dutch oven curriculum is intended to help youth have fun and be safe while cooking outdoors. The curriculum is designed to help youth learn valuable life skills through participation in Dutch oven cooking activities. By using the experiential learning model described in the next few pages and purposefully introducing life skills, youth will learn skills beyond cooking that they can apply for a lifetime!

Introduction

Dutch oven cooking is a special activity that can be enjoyed by all. The fun comes not only from eating, but also from all the learning experiences that lead you to produce the finished product. This project was written for those who love being in the outdoors, whether that means the mountains, at a state campground, or right in your own backyard. There are two manuals for this project. Unit 1 gives you the basics to get started. Unit 2 explores the history of the Dutch oven, emphasizes temperature coordination and control of Dutch ovens, and focuses on cooking meats and baking yeast breads.

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

Note to project helpers: There is one project Helper's Guide for both units of this project. This guide includes additional information and helpful advice for you, the adult, to guide youth through the Dutch oven project.

Acknowledgments

Originally published in 2012 by Nancy Shelstad, Joey Peutz, and Claudia Brush; updated in 2018 by Julie Buck, Nancy Shelstad, and Amy Robertson.

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Look for these symbols throughout the Helper's Guide to identify specific life skills, bright ideas, activities, and background information.

Targeting Life Skills
This symbol is used to aid the helper in recognizing the life skills to focus on while leading the project.

Bright Idea
This symbol is used to aid the helper in identifying some suggestions, ideas, or points of discussion that will be helpful in teaching the subject matter information.

Activity
This symbol is used to aid the helper in locating hands-on experiential activities for youth in addition to the activities in the member's project manual.

Background Information
This symbol is used to identify additional background information that the project helper can reference and use to enhance activities or discussion questions.

Experiential Learning Model

The effectiveness of the "learning by doing" methodology [or approach] is one of the main reasons 4-H has been so widely recognized and respected in the field of informal education. It engages the learner, encouraging youth to think more, work hard, and ultimately learn more thoroughly than with traditional teaching methods. The Dutch oven curriculum follows a model known as the experiential learning process. Experiential learning is more than just doing activities. It involves discussing the activity, drawing conclusions from the activity, and applying them to the real world.

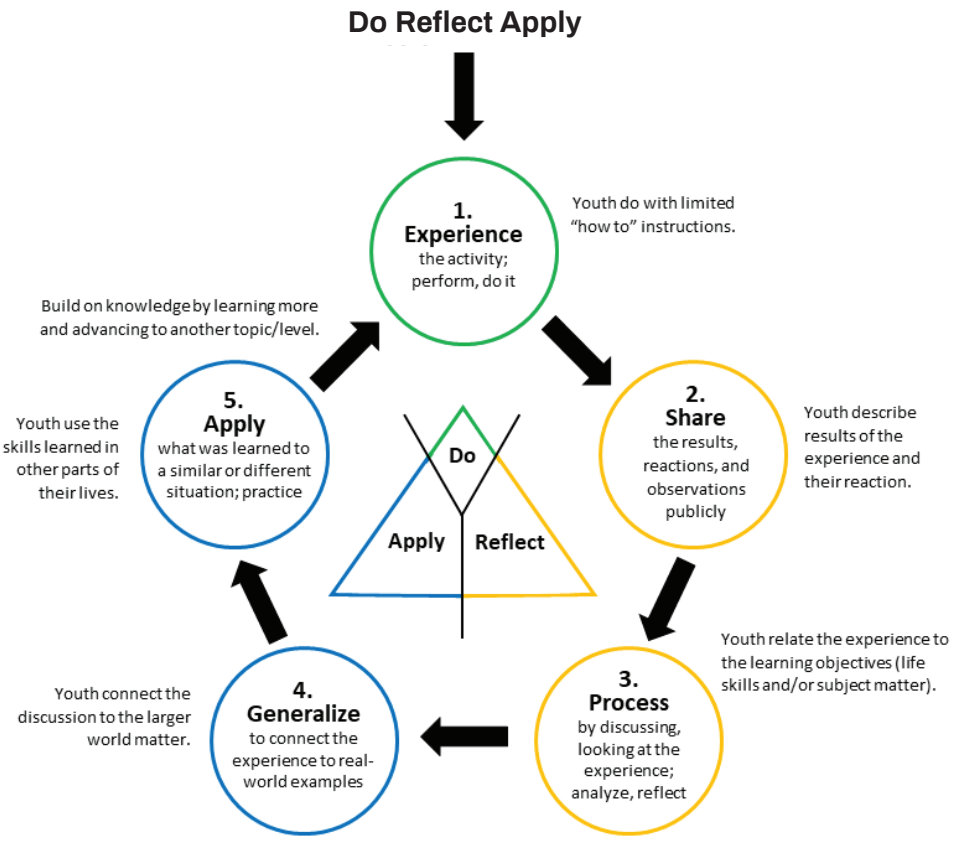
How It Works

Do

1. **Experience** – Begin with a concrete experience. This can be an individual or group activity that involves "doing something."

Reflect

2. **Share** – Next, ask the group or individual to talk about what they experienced when they were doing the activity. Share reactions and observations. Talk freely. Sharing questions to ask:
   - What did you do?
   - What happened?
   - How did you feel about…?
   - What was the most difficult? Easiest?
   - What would you do differently?



Courtney F. Dodd, Ph.D. Assistant Agency Director & State 4-H Program Leader. Texas A&M AgriLife Extension Service. Used with permission.

3. **Process** – Discuss how questions are created by the activity. Processing questions to ask (use information generated from sharing questions):
   - What problems or issues seemed to occur over and over?
   - What similar experience(s) have you had?

Apply

4. **Generalize** – Find general trends or common lessons in the experience. Identify the important points that apply to the "real world." Generalizing questions to ask:
   - What did you learn about yourself through this activity?
   - What did you learn about making decisions (or other life skills)?
   - How do the major themes or ideas relate to life and not just the activity?
   - How did you go about making your decision?
5. **Apply** – Talk about how the new information can be applied to everyday life or sometime in the future. Applying questions to ask:
   - How can you apply what you learned to a new situation?
   - How will the issues raised by this activity be useful in the future?
   - How will you act differently in the future because of this activity?

Developing Project and Life Skills

The Dutch oven curriculum is designed to help youth develop both project and life skills. Project skills are specific to the food-related subject matter, such as learning how to bake a cake in a Dutch oven. Life skills relate to the process a member undergoes when doing an activity. The life skills learned are useful long after the member completes the project, such as making decisions or building self-confidence.

Project Skills

Project skills have a much broader scope than just skills related to food preparation using a Dutch oven. Because curriculum designers intend youth to learn more about food preparation beyond its relation to Dutch oven use, the curriculum targets the development in youth of the following project skills:

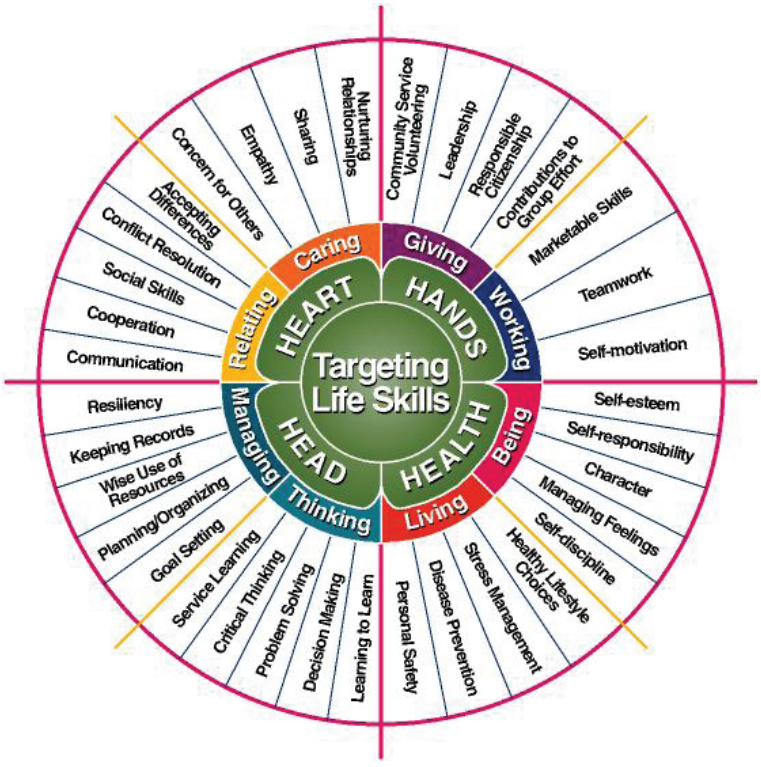
- Healthy food selection
- Outdoor cooking safety
- Temperature control
- Selection & care of Dutch oven cooking equipment
- Food safety
- Food preparation
- Meal planning

Life Skills

Youth development is a process of mental, physical, social, and emotional growth during which young people prepare to live a productive and satisfying life in society. Youth development experiences of high quality don't just happen. The best ones are carefully planned (a) to encourage life-skill development while delivering subject-matter content, and (b) to achieve specific results.

A skill is a learned ability to do something well. Life skills are abilities individuals can learn that will help them to be successful in living a productive and satisfying life. In the Targeting Life Skills Model categories, life skills are identified and divided based on the familiar four Hs from the 4-H clover that represent Head, Heart, Hands, and Health. Two general categories of skills are included under each of the four headings.

Targeting Life Skills Model



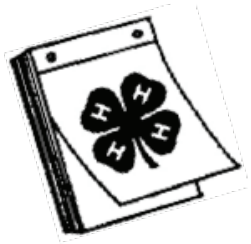
Patricia A. Hendricks. Targeting Life Skills (TLS) Model. Iowa State University Extension, 1996. Retrieved May 24, 2018 from https://fyi.uwex.edu/wi4hvolunteers/files/2016/06/Life-Skills-Wheel.pdf3. Used with permission. Copyright ©2010 Iowa State University Extension.

The goal of the Dutch oven project is to provide developmentally appropriate opportunities for young people to experience outdoor cooking and life skills, to practice them until they are learned, and to use them as necessary throughout a lifetime. As a helper, you can assist youth in life-skill development by encouraging them to set project goals, to make decisions, and to become positive role models.

Getting Organized

Set Expectations

Clear expectations lead to success. As the project helper, it is up to you to set clear expectations of project participants. Therefore, it is also your responsibility to plan ahead and provide a calendar outline of project activities. Be sure to review the project requirements in the State 4-H Project Requirements list and provide a copy for each member enrolled in this project. This includes communicating what the end exhibit should be for project completion. Schedule meetings and provide an outline of what will be covered at each meeting, including when oral presentations will be given and when record books will be complete.



Don't forget to consider the expectations of parents. Are parents required to stay for every meeting? Are they expected to sit back and watch or are they expected to help with certain activities? In setting the expectations of parents, remember that this is a youth project and adults should only provide *limited, necessary assistance*. An important aspect of 4-H is that youth "learn by doing." If adults, including the project helper, allow youth to actively participate rather than do it for them, the members will vastly increase their learning.

Set Clear Expectations
• Project expense & supplies
• Project requirements
• Exhibit requirements
• Meeting schedule & outline
• Project completion deadlines
• Parent & project helper expectations
• Member expectations

Review Safety

Remember that Dutch oven cooking means working with fire and hot coals. Keeping the 4-H members safe and the environment safe should always be top concerns. Constant reminders to 4-H members about keeping a safe environment around hot coals and fire are warranted.

Remember:

- Start briquettes on dirt, gravel, or concrete. Starting briquettes on asphalt will cause the asphalt to melt as they get hot. Wood or plastic surfaces will burn or melt.
- Anyone working around the Dutch oven cooking area should wear closed-toe shoes, both because of the hot coals and the risk of dropping a heavy oven.
- Heavy-duty work gloves should be used when picking up hot coals or hot pots.
- Additional safety information can be found on pages 17–18.

Food safety is another concern. Be familiar with safe food-handling practices. When cooking outdoors, it is easy to lose track of things like how long food has been out of the refrigerator either before or after cooking, if food has been left in the sun or uncovered, or if a dirty plate has been reused. Be sure to teach about food safety as covered in the Safety First section of this Helper's Guide.

Developing SMART Goals

Help youth to set a goal or two (depending on their age) related to physical activity. Teach or review good goal-setting steps by using the SMART system:

S = Specific M = Measurable A = Attainable R = Relevant T = Time-Bound

Paul J. Meyer describes the characteristics of SMART goals in "Attitude is Everything: If You Want to Succeed Above and Beyond."

Specific

The first term stresses the need for a specific goal over and against a more general one. This means the goal is clear and unambiguous. To make goals specific, youth must tell exactly what is expected, why it is important, who is involved, where it is going to happen, and which attributes are important.

A specific goal will usually answer the five "W" questions:

- What: What do I want to accomplish?
- Why: Why will accomplishing the goal benefit me?
- Who: Who is involved?
- Where: Where will I accomplish my goal?
- Which: Which requirements and constraints will affect accomplishing my goal?

Measurable

The second term stresses the need for concrete criteria for measuring progress toward the attainment of the goal. The thought behind this is that if a goal is not measurable, it is not possible to know whether progress is being made toward its successful completion. Measuring progress helps an individual stay on track, reach target dates, and experience the exhilaration of achievement that spurs the effort that is necessary to reach the ultimate goal.

A measurable goal usually answers questions such as:

- How will I know when it is accomplished?
- How much?
- How many?

Attainable

The third term stresses the importance of goals that are realistic and attainable. While an attainable goal may stretch an individual to achieve it, the goal is not extreme. That is, the goals are neither out of reach nor below standard performance. When you identify goals that are most important to you, you begin to figure out ways you can make them come true. You develop the attitudes, abilities, skills, and financial capacity to reach them. An attainable goal may cause goal setters to identify previously overlooked opportunities to bring themselves closer to the achievement of their goals.

An attainable goal usually answers the following question:

- How can the goal be accomplished?

Relevant

The fourth term stresses the importance of choosing goals that matter. A bank manager's goal to "make 50 peanut butter and jelly sandwiches by 2:00 pm" may be Specific, Measurable, Attainable, and Time-Bound, but lacks Relevance. Many times, you will need support to accomplish a goal: resources, a champion voice, or someone to knock down obstacles. Goals that are relevant to your boss, your team, and your organization will receive that needed support.

Relevant goals (when met) drive an individual forward. A goal that supports or is in alignment with other goals would be considered a relevant goal.

A relevant goal is one for which the answer to these questions is "yes":

- Does this seem worthwhile?
- Is this the right time?
- Does this match our other efforts/needs?
- Are you the right person?

Time-Bound

The fifth term stresses the importance of grounding goals within a time frame, giving them a target date. A commitment to a deadline helps focus efforts on completion of the goal on or before the due date. This part of the SMART goal criteria is intended to prevent goals from being overtaken by day-to-day activities. A time-bound goal is intended to establish a sense of urgency.

A time-bound goal usually answers the following questions:

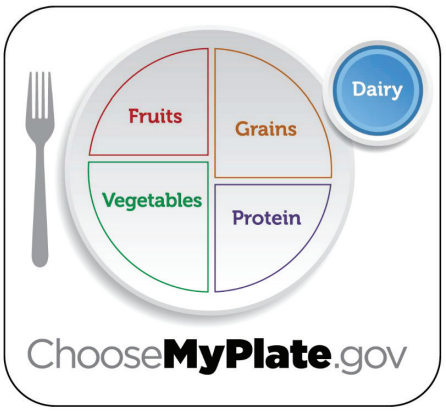
- When?
- What can I do 6 months from now?
- What can I do 6 weeks from now?
- What can I do today?

Source: Paul J. Meyer. *What Would You Do If You Knew You Couldn't Fail? Creating S.M.A.R.T. Goals—Attitude is Everything!: If You Want to Succeed Above and Beyond!* Waco, TX: Meyer Resource Group, 2003.

Nutrition and Healthy Living

The Dutch oven cooking 4-H project can give youth the opportunity to learn to prepare nutritious and safe meals with the guidance of a project helper. ChooseMyPlate is a visual tool that can guide members to make good food choices. Empower youth to make small changes, such as switching from

- High calorie snacks → Nutrient-dense foods
- Fruit products with added sugar → Whole fruit
- Refined grains → Whole grains
- Snacks with added salt → Unsalted snacks
- Solid fats → Oils
- Beverages with added sugars → No sugar-added beverages



Source: United States Department of Agriculture, www.choosemyplate.gov.

Background Information

One size doesn't fit all

USDA's ChooseMyPlate symbolizes a personalized approach to healthy eating. The symbols, designed to be simple, have been developed to remind consumers to make healthy food choices.

Key messages to teach youth include:

All food and beverage choices matter – focus on variety, amount, and nutrition.

- Focus on making healthy food and beverage choices from all five food groups, including fruits, vegetables, grains, protein foods, and dairy to get the nutrients you need.
- Eat the right number of calories for you based on your age, sex, height, weight, and physical activity level.
- Building a healthy eating style can help you avoid being overweight and reduce your risk of diseases such as heart disease, diabetes, and cancer.

Choose an eating style low in saturated fat, sodium, and added sugars.

- Use Nutrition Facts labels and ingredient lists to find amounts of saturated fat, sodium, and added sugars in the foods and beverages you choose.
- Look for food and drink choices that are lower in saturated fat, sodium, and added sugar.
  - Eating fewer calories from foods high in saturated fat and added sugars can help you manage your calories and prevent becoming overweight or obese. Most of us eat too many foods that are high in saturated fat and added sugar.
  - Eating foods with less sodium can reduce your risk of high blood pressure.

Make small changes to create a healthier eating style.

- Think of each change as a personal "win" on your path to living healthier. Each "MyWin" is a change you make to build your healthy eating style. Find little victories that fit into your lifestyle and celebrate as a "MyWin"!
- Start with a few of these small changes.
  - Make half your plate fruits and vegetables.
    - Focus on whole fruits.
    - Vary your veggies.
  - Make half your grains whole grains.
  - Move to low-fat and fat-free dairy.
  - Vary your protein routine.
  - Eat and drink the right amount for you.

Support healthy eating for everyone.

- Create settings where healthy choices are available to and affordable for you and others in your community.
- Professionals, policymakers, partners, industry, families, and individuals can help others in their journey to make healthy eating a part of their lives.

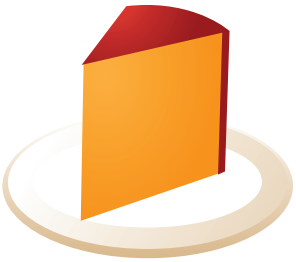
Physical Activity and Goal Setting

Help kids become more physically active. In Dutch Oven Cooking Project Manual Unit 1, youth track their physical activity for one week. Help them look at their activity and determine if they are meeting the recommendations. Children and adolescents should do 60 minutes or more of physical activity each day. Most of the 60 minutes should be either moderate- or vigorous-intensity aerobic physical activity and should include vigorous-intensity physical activity at least three days a week. As part of their 60 or more minutes of daily physical activity, children and adolescents should include muscle-strengthening activities, like climbing, and bone-strengthening activities, like jumping, each at least three days a week. Children and adolescents are often active in short bursts of time rather than for sustained periods of time, and these short bursts can add up to meet their physical activity needs. Physical activities for children and adolescents should be developmentally appropriate, fun, and offer variety. Help youth set age-appropriate goals related to physical activity (refer to Developing SMART Goals section).

ChooseMyPlate Matching Activity

While doing a Beyond Cooking activity from Unit 1 or 2, youth should identify which groups various foods belong to or where they're located on the plate. This is a basic activity geared toward younger members. If older youth are completing the project, consider adding the information provided below.

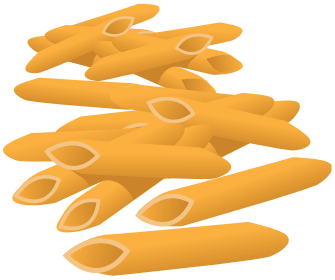
Food and Food Groups:



Dairy Group: Milk, yogurt, ice cream, cheese, etc.

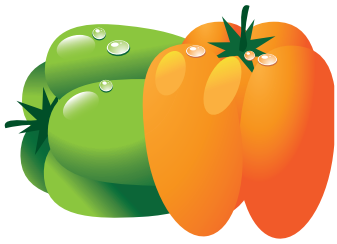
To expand this activity, discuss the nutrients provided from the dairy group.

- Calcium is used for building bones and teeth and maintaining bone mass. Dairy products are the primary source of calcium in American diets. Diets that provide three cups of dairy products (or their equivalent) per day can improve bone mass.
- Diets rich in potassium may help to maintain healthy blood pressure. Dairy products, especially yogurt and fluid milk, provide potassium.
- Vitamin D helps in the body to maintain proper levels of calcium and phosphorous, thereby helping to build and maintain bones. Milk and soy milk (soy beverage) that are fortified with Vitamin D are good sources of this nutrient. Other sources include Vitamin D–fortified yogurt and Vitamin D–fortified ready-to-eat breakfast cereals.
- Milk products that are consumed in their low-fat or fat-free forms provide little or no solid fat, which makes them a healthier choice.



Grain Group: bread, pasta, rice, etc.

To expand this activity, discuss which foods are in the grain group —any food made from wheat, rice, oats, cornmeal, barley, or other cereal grain. Discuss including whole grain options (such as whole wheat, brown rice, and quinoa) for half of the grain daily food choices.

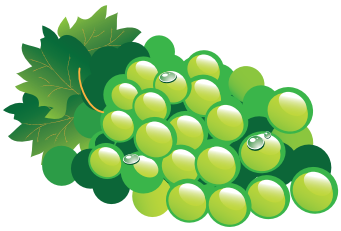


Vegetable Group: cabbage, corn, beets, potatoes, carrots, etc.

To expand this activity, discuss nutrients and health benefits.

- Eating a diet rich in vegetables and fruits as part of an overall healthy diet may reduce risk for heart disease, including heart attack and stroke.
- Eating a diet rich in some vegetables and fruits as part of an overall healthy diet may protect against certain types of cancers.
- Diets rich in foods containing fiber, such as some vegetables and fruits, may reduce the risk of heart disease, obesity, and type 2 diabetes.

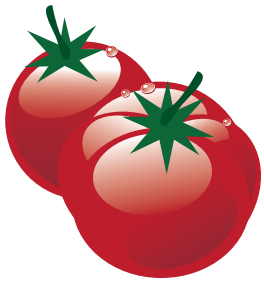
- Eating vegetables and fruits rich in potassium as part of an overall healthy diet may lower blood pressure and may also reduce the risk of developing kidney stones and help to decrease bone loss.
- Replacing high-calorie foods with foods such as vegetables may be useful in helping to lower calorie intake.



Fruit Group: plums, pears, strawberries, apples, etc.

To expand this activity, discuss the nutrients that fruit provides.

- Most fruits are naturally low in fat, sodium, and calories. None have cholesterol.
- Fruits are sources of many essential nutrients that are underconsumed, including potassium, dietary fiber, Vitamin C, and folate (folic acid).
- Diets rich in potassium may help to maintain healthy blood pressure. Fruit sources with potassium include bananas, prunes and prune juice, dried peaches and apricots, cantaloupe, honeydew melon, and orange juice.
- Dietary fiber from fruits, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower the risk of heart disease. Fiber is important for proper bowel function. It helps reduce constipation and diverticulosis. Fiber-containing foods such as fruits help provide a feeling of fullness with fewer calories. Whole or cut-up fruits are sources of dietary fiber; fruit juices contain little or no fiber.
- Vitamin C is important for the growth and repair of all body tissues, the healing of cuts and wounds, and the maintenance of healthy teeth and gums.
- Folate (folic acid) helps the body form red blood cells.



Food Safety

Handwashing is one of the most important lessons we can teach to prevent illness. Below is an activity you can use with 4-H youth.

Healthy Lifestyle – Targeting Life Skill

Handwashing is an important healthy lifestyle skill. Learning when and how to wash hands correctly will improve food safety and personal health.

Background Information

According to the American Society of Microbiology, 97% of females and 96% of males say they wash their hands after using the bathroom, but only 93% of females and 77% of males actually wash. A handwashing study conducted with middle and high school students revealed that only 50% of students wash, and of these only 33% of females and 8% of males use soap!

Source: Minnesota Department of Health, http://www.health.state.mn.us/handhygiene/.

Don't-Get-Caught-Dirty-Handed Activity

Materials: *GlitterBug Potion—Contact your Extension office to borrow or order from Brevis.com

*Ultraviolet light stick—Contact your Extension office to borrow or purchase one at a local department or hardware store

Access to warm running water, soap, and paper towels

Procedure:

1. Explain that the GlitterBug Potion can be thought of as pretend germs.
2. Place one squirt (or approximately ½ tsp) of GlitterBug Potion in the palm of each 4-H'ers hand; have them rub GlitterBug Potion all over their hands and wrists as if they were applying hand lotion.
3. Have the 4-H'ers observe "contaminated" hands under the UV light.
4. Instruct youth to wash hands without any hints as to correct technique.
5. Have all youth check hands with UV light for any residual GlitterBug Potion (contamination).
6. Point out areas commonly missed: cuticles, under fingernails, thumb and finger webs, and wrists. Using a drawing or diagram of a hand to mark the missed areas is a good reinforcement.
7. Ask youth if they know how long they should spend washing their hands. (The correct answer is 20 seconds—or singing the alphabet song or "Row, Row, Row Your Boat" for young participants.)

*If you are not able to borrow or order GlitterBug Potion and a black light, see alternative activity on page 13.

8. Instruct as to the correct handwashing procedure:
    a. Use soap and warm running water.
    b. Point fingers down.
    c. Rub hands vigorously for 20 seconds.
    d. Wash all surfaces including backs of hands, wrists, between fingers, tips of fingers, thumbs, and under fingernails (use of nailbrush is best).
    e. Dry vigorously with paper or clean cloth towel.
    f. Turn off faucet with towel.

After completing the Don't-Get-Caught-Dirty-Handed activity, look at everyone's hands and see if you can answer these questions:

- How long should you wash your hands? When should you start counting? (The 20 seconds are the "rubbing" time, not the entire time at the sink.)
- Should you use warm or cold water to wash your hands? (Warm water.)
- Why is soap important? (Helps to loosen the dirt and germs off the hands before they are rinsed down the sink.)
- How will you use handwashing skills in your Dutch Oven project?

**Alternate to Don't-Get-Caught-Dirty-Handed Activity*

If you are not able to borrow or order GlitterBug potion and a black light, here is an alternative activity.

Materials: Cooking oil

Ground cinnamon

Access to warm water, soap, and paper towels

Procedure:

1. Ask youth to roll up their sleeves so that their hands and wrists are exposed.
2. Pour about ½ tsp of cooking oil on youth's hands and ask them to rub it in like you would do with lotion.
3. Sprinkle about ¼ tsp of ground cinnamon on youth's hands asking youth to rub this in like lotion.
4. Have youth wash their hands with cold water, no soap, for 10 seconds. (Observe and discuss.)
5. Have youth wash their hands with warm water and soap for 20 seconds. (Observe and discuss.)

Basics of Dutch Oven Cooking

Selecting and Buying a Dutch Oven

Bright Idea

Showing examples of different-sized ovens will help to illustrate the discussion of selecting and buying Dutch ovens.

Background Information

- When purchasing an oven, look at how the lid fits. Make sure it fits snugly and doesn't wobble. Most lids will have a little play when seated on the oven, but a little is all you want. Poor-fitting lids allow heat to escape and will increase cooking time.
- The inside of the pot should be smooth with no blemishes. Any swirls created by the casting will eventually cause weakening of the oven followed by metal failure and cracks.
- Talk about what they will be using the pot for and what size will work best. Shallow ovens are perfect for baking, while deep ovens work well when cooking soups, stews, and meats.

Field Trip Activity

Take a field trip to a store and explore the variety of Dutch ovens and accessories. Arrange for someone from the store to spend time talking about the differences between aluminum and cast iron ovens and selecting accessories.

Dutch Oven Accessories and Cooking Tools

Spend some time helping the project members identify the most common tools and equipment used in Dutch oven cooking. Have each member take turns showing and describing how to use each item (referring to the list in the project manual).

As part of the discussion of cooking accessories, be sure to also show and talk about different sizes of Dutch ovens (see recipe book for chart of oven sizes and number of servings). While the most commonly used size is a 12-inch oven, smaller or larger sizes may be more appropriate for some food dishes.

Bright Idea

Print (double-sided) the Concentration card game from the appendix of this Helper's Guide. It will be best to print on cardstock so the words and images don't show through. If there is some downtime during project meetings (for example, while waiting for everyone to arrive before a project meeting starts or while food is cooking), bring out the deck of cards for the members to play a game of Concentration. This can serve as a review of Dutch oven cooking tools and terms and help the members stay focused on the project.

Further ideas for questions and/or activities regarding accessories and tools:

- List the accessories and tools that you and/or your family use often and the reasons why you use them.
- List the tools mentioned above that you borrow (or share with another 4-H'er).
- What equipment would you like to own next?
- What do you use to lift the lid on your hot Dutch oven? Does it protect you enough from the heat?
- Where do you place the lid while stirring food in the Dutch oven?

Cooking "Tack Box" Activity

Ask project members to plan and list the equipment and cooking utensils they will need. Have youth gather, organize, and build a Dutch oven cooking "tack box" that they will bring to each cooking meeting. For example:

Equipment	**Cooking Utensils**	**Cleaning Essentials**
Charcoal chimney	Bowl for mixing	Scraper
Charcoal	Spoons for mixing	Brush
Lighter fluid	Spatula	Oil
Lighter	Measuring cups	Paper towels
Gloves	Wooden spoons	
Lid lifter	Cooking tongs	**Serving Utensils**
Lid holder	Measuring spoons	Serving spoons
Coal tongs	Can opener	Serving bowls
Coal bucket and shovel	Sharp knives	Serving platter
Trash bags	Cutting board	Ladle
Aluminum foil		

Caring for a Pre-Seasoned Dutch Oven

A Dutch oven that is purchased pre-seasoned is ready to use without any treatment. But, as with all newly purchased cooking equipment, it should be washed before first use. With Dutch ovens, the initial wash is with hot water only, no soap, then thoroughly dried inside and out. Before using the first time, apply a thin layer of vegetable oil or food-grade mineral oil, then continue the cooking process and clean after each use. Use of cooking spray is not recommended because it may leave a sticky residue.

Seasoning a Dutch Oven

Bright Idea

As an alternative to just talking about how to season a Dutch oven, have project members season a Dutch oven during a project meeting. Use a new oven that needs seasoning or one that needs re-seasoning. Have the group practice the steps for seasoning. Refer to Dutch Oven Cooking Project Manual Unit 1, "Seasoning a Dutch Oven" for the appropriate steps.

As part of the activity or discussion here are a few questions to talk about:

- When should a Dutch oven be seasoned?

  Answer: When you first purchase an unseasoned oven or if the seasoning begins to chip away.

- Why can you use soap on an unseasoned oven but not after it is seasoned?

  Answer: Using hot soapy water and a stiff brush cleans away any residue from the casting process and during shipping. Use of soap after seasoning will remove any seasoning you've built up during cooking.

- Why use vegetable oil instead of lard or animal fat?

  Answer: Lard or animal fat can turn rancid, requiring the need to scour with soap and water and then re-season.

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

Answer: Improper care and cleaning can cause a Dutch oven to develop a rancid or unpleasant smell and taste that transfers to the food prepared in it.

Keeping a Dutch Oven Clean

Cleaning up after fixing a meal is just as important as the cooking itself! Cleaning the Dutch oven and cooking accessories immediately after cooking a meal will save time in the long run. Leftover food not properly cleaned out of the Dutch oven will cause the seasoning to deteriorate and the oven to become rancid. Cleaning and oiling after each use will help you to avoid having to re-season it.

Have project members explain in detail to a partner what they did to get their Dutch oven ready for this project (washing it, seasoning it, and/or cleaning it) and what steps they will take to keep it clean after each use. Refer to Project Manuals Unit 1 or 2 for more detailed Dutch oven cleaning tips.

Bright Idea

Line a Dutch oven with aluminum foil when cooking a Pineapple Upside-Down Cake or other desserts with a high sugar content. This will make cleanup easier.

Storing a Dutch Oven

Background Information

Review the information in Dutch Oven Cooking Project Manual, Units 1 and 2. It is important when storing a Dutch oven to keep the lid cracked so air can circulate. This can be accomplished by laying a paper wick, made from a napkin or paper towel folded accordion style, across the rim of the oven, leaving a small amount outside, and then setting the lid on top. The wick also acts to draw any moisture out of the oven. Rancidity may occur while the Dutch oven is stored and will result in a sour odor. Rancidity is an oxidation

process resulting from the combined effect of temperature and the residue of fat or oil on the Dutch oven. A rancid oven must be stripped of its protective coating and then be re-seasoned again.

It is also recommended but not required to place a Dutch oven in a protective cover to keep it from collecting dust and to keep anything that might brush up against it from getting dirty. The cover also helps to protect the outside finish on the oven from being scratched in transit when camping or transporting ovens.

Bright Idea

Here are some questions or discussion points to explore with project members:

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

  Answer: Answers will vary. The best places may be in a cupboard in the kitchen, under a bed in a spare bedroom, etc.

- Why is it the best place to store *your* Dutch oven?

  Answer: Assess if the member understands that the location should have a consistent temperature, and be dry. Also consider the weight of the Dutch oven. A high shelf may not be a good choice.

- What causes a Dutch oven to rust?

  Answer: Water/Incorrect storage (not drying a Dutch oven properly; exposing it to high humidity).

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

  Answer: Make sure the oven is dry and crack the lid so there is air flow.

Safety First

At the first project meeting, review the safety points with members. Below are safety points from the member project manuals. It is important to review safety at every meeting.

Always Cook in a Traffic-Free and Shrub-Free Area!

1. Coals are HOT and can cause serious burns! Do not drop coals on the ground because sparks may splatter and either burn someone or something. Stepping on a hot coal can melt through rubber-soled shoes, ruining the shoes and causing burns. A small child may try to pick up a glowing coal not understanding that it is hot. Keep a careful eye on young children and check around your cooking area often for stray coals.
2. Use oven mitts or leather gloves when moving a hot Dutch oven. Be sure they are thick enough to absorb the heat of the Dutch oven. Remember that the heat of the oven will eventually penetrate though oven mitts or gloves the longer they are in contact with the oven. If you use a Dutch oven tool, make sure the oven is secure and does not tip before you begin to move it.

3. While cooking, keep loose clothing, tablecloths, and towels away from hot coals. These types of items will catch on fire quickly if they come in contact with hot coals.
4. Always open Dutch oven lids away from you so the escaping steam does not burn your face. This also helps avoid dropping ashes or coals from the top of the lid into the food.
5. Put lids on a clean rock or stand. This serves two purposes: first it keeps the lid off the ground so it will not pick up sand or dirt from the ground that may then be transferred back into the oven when the lid is replaced, and second, the lid is in a place that is less likely to be stepped on or tripped over.
6. Watch hot oil closely. It can burst into flames if it gets too hot. Be careful when adding frozen ingredients because ice crystals or moisture will cause the hot oil to splatter and burn. Add ingredients to hot oil with long-handled tools such as tongs or spoons to keep hands and arms further away from potentially splattering oil.
7. IMPORTANT!! Do not burn charcoal briquettes indoors. Charcoal briquettes give off toxic fumes when burning, even if the flame is gone. Hot coals require good outdoor ventilation.

Bright Idea

As part of a group discussion on the safety and handling of hot coals, have youth practice moving cold briquettes with charcoal tongs. Ask youth to demonstrate, using cold briquettes, how they would safely move hot coals from one place to another and how they would stack them.

Bright Idea

Follow-up questions that should be asked throughout the cooking project:

- How do you safely remove and properly dispose of hot coals when you are finished cooking?

  Answer: Use a coal shovel to scrape the hot coals into a coal bucket; allow coals to cool by dousing with water and stirring until no coals are glowing or smoking. Depending on location, dump cold coals in a fire pit, the dirt, a rocky area, or in a metal garbage receptacle.

- What additional safety tips can youth add to the list?

  Answer: Never add fire starter after your briquettes have begun to kindle. The heat from the coals may ignite the stream of flammable liquid and burn back to the can, causing it to explode in your hand. This also applies to cooking oil spray.

Activity (Create a First Aid Kit)

A well-stocked first aid kit is a handy thing to have. To be prepared for emergencies, encourage members to make their own first aid kit, specific to outdoor cooking. Ask the member to research important items to include in the kit, where to purchase it, and its cost. For a list of recommended items in a general first aid kit, refer to the Red Cross website (http://www.redcross.org/services/hss/lifeline/fakit.html). If appropriate, have youth assemble the kit and bring it to all Dutch oven project meetings.

Fires for Dutch Oven Cooking

Demonstrate (or use as an exercise) the different ways to light charcoal.

- Using the charcoal chimney, show how to light charcoal:
  - Crinkle a piece of newspaper and place under the chimney. Fill chimney with charcoal. Light the newspaper and hot coals will be ready in about 15 minutes.

OR

  - Fill chimney with charcoal. Pour lighter fluid over charcoal, then light the charcoal. Hot coals will be ready in about 15–20 minutes.

- Make your own chimney starter:
  - Take a large coffee can or metal tub and open holes around the bottom to allow for air flow.
  - Attach a handle for handling the can or tub.
  - Add newspaper to the bottom and place charcoal on top of the newspaper.
  - Light newspaper through holes in the bottom.

OR

  - Leave out the newspaper and instead fill can/tub with charcoal.
  - Soak coals with lighter fluid and then ignite them.

Alternative Fire-Starting Methods

After you have gained experience with a chimney starter, experiment and try one of the following:

Egg Carton Charcoal Starters

Charcoal may be started using wax and a cardboard egg carton. Separate the lid from a cardboard egg carton and set the bottom of the carton inside the lid. A little wax poured inside the lid first will make the cupped half adhere to it. Then place a piece of charcoal in each cup and pour approximately ¼ inch of melted paraffin over it. When finished, stack more charcoal on top of the waxed ones. Light the carton and wait for all the charcoal to heat.

Starting Charcoal Over a Campfire

An effective way to start charcoal over an open fire is to shape a screen (½–¾-inch mesh) into a bucket or bowl-shaped basket. Make a wire bale for lifting or carrying. Place the desired amount of charcoal into the basket and set it over an open fire. If the fire is hot, particularly if there are good flames, the charcoal will start quickly and heat evenly.

Wood Chips and Wax

Start charcoal using wood shavings and wax. Carefully melt wax in a large tin cup (industrial-sized cans). The amount of wax used depends on how much you want to make and the amount of shavings you have. After melting, remove the can from the heat and place it on a heat-proof surface. Using a stick, stir in enough wood shavings until no wax is left and all the wood shavings are coated. This mixture can be stored in the can and just enough taken out to start the briquettes or you can place the coated shavings in paper cupcake liners for easy use.

Oral Presentation Ideas

Bright Idea

Oral presentations help youth build life skills in public speaking, self-confidence, and organization. An oral presentation is showing and telling an audience how to do something or telling an audience about something. The topic should be something that the project member has learned during the current year's project. Members should be encouraged to challenge themselves by selecting a topic and researching the topic thoroughly. The complexity of the presentation should match the age and development of the member. Here are some ideas:

Food and Outdoor Safety Topics

- Safety in cooking outdoors
- Handwashing
- All about thermometers
- Four basic rules to food safety

Nutrition Topics

- How to plan a nutritious meal
- MyPlate

Preparing a Specific Food

- How to cook rice
- How to make breakfast pancakes on the lid
- Cooking eggs in the Dutch oven
- Preparing, cooking, and serving a green vegetable
- How to make quick breads
- How to make yeast bread

Planning Topics

- Meal planning
- How to plan a food budget
- How to plan breakfast

Getting Started Topics

- Proper measuring techniques
- How to correctly start coals
- Use of Dutch oven tools
- How to season and maintain a Dutch oven
- Selecting and purchasing a Dutch oven
- Different types of fires (advantages and disadvantages)
- How to make a charcoal chimney
- Use of coals in achieving specific cooking temperatures
- Measuring equivalents

Other

- History of Dutch oven cooking

Getting Started

Bright Idea

It is important for the project helper to know the experience level of the members enrolled in the Dutch oven project. Some questions to ask and discuss are:

- Do you know what a Dutch oven is?
- Do you or your family own one or many Dutch oven(s)?
  - If yes, how long have you owned it (them)?
  - If no, how did you become interested in Dutch oven cooking?
- What size or sizes are the Dutch ovens?
- Who in your family uses the Dutch oven most often?
- Have you made something in a Dutch oven before participating in this project?
  - If yes, what have you made?
- Why are you participating in the 4-H Dutch oven project?

There are many fun ways to get to know project members' level of knowledge. Here are some suggestions:

- At the beginning of the project meeting, have all the members sit (or stand) in a circle and one at a time answer one or more of the questions above.
- Write several questions on strips of masking tape. Using an inflated beach ball (or other similar soft, large ball), tape the strips on the ball. Toss the ball around the room among the members. Members who catch the ball must answer the question closest to their right thumb.
- Write several questions on individual pieces of paper and put one piece of paper in each balloon. When the members arrive at the project meeting, have them select a balloon, blow it up, and tie it shut. Have the members stand in a circle and toss the balloons in the air. Each member catches a balloon and, one at a time, pops the balloon and answers the question that falls out.

Estimating Temperatures

Determining the number of coals and placement of the coals to achieve a specific cooking temperature will take some practice. Carefully review the information in the project manual with the youth. Start by introducing one variable at a time. Variables include:

- Size of Dutch oven
- Temperature
- Replacing coals as they burn out
- Type of cooking (baking, frying, steaming)
- Environmental conditions (outside temperature, wind, etc.)

For example, ask the project members to determine the number and the placement of coals needed for cooking in a 12-inch oven at 325°F; then have them recalculate the same for cooking in a 12-inch oven at 350°F. After the project members have been able to practice making the determinations for several temperatures with a 12-inch oven, change the example to a 10-inch oven. Next, introduce the variable of replacing the coals as they burn down.

Bright Idea

Have the project members demonstrate, using an oven and briquettes (cold coals), how to estimate the temperature for 325°F, 350°F, etc. rather than just talking about it or writing down on paper the number of coals and the placement.

The concept of estimating temperatures will need to be addressed several times throughout the course of the project and project members will need to practice by experimenting with placing coals appropriately to reach a desired cooking temperature.

Remind youth to carefully watch the food as it cooks and make adjustments as needed. Unit 2 of this project will go into more detail about temperature control.

Bright Idea

Here's an easy way to help youth to understand the "3 up, 3 down" concept of temperature control. Start with a 12-inch Dutch oven. Arrange 12 briquettes on top of and 12 briquettes under the oven. Then take 3 briquettes out from under the oven and set up on top of the lid. This is the "3 up, 3 down" method to produce a 325°F oven. Try it with different-sized ovens. Then start adding one briquette on top of and one under the oven to increase the temperature by 25°F. Once they understand the concept, you can arrange briquettes with different numbers on top of and under the ovens to see if they can determine the temperature you are trying to achieve.

Cooking on the Dutch Oven Lid

Background Information

The Dutch oven lid can be used just like a griddle or skillet. By keeping lots of heat under the upturned lid, you can cook bacon, hamburgers, pancakes, or even crepes. Use your imagination when talking with the youth.

Discussion topics:

- How will they set up the lid for cooking?
- What will they use to keep the lid stable?
  - Turn the lid holder upside down so the top handle doesn't touch anything when the lid is put in place.
  - Find three pieces of brick the same size and arrange in a triangle so the top handle doesn't touch anything when the lid is put in place.
  - Find three similarly sized large flat rocks and arrange in a triangle so the top handle doesn't touch anything when the lid is put in place.
  - Put a large amount of coals in the center of the triangle or lid holder, then place the upturned lid on top.

Measuring Equivalents

Targeting Life Skills (Using Logic)

Below is a simple measuring equivalents list from Dutch Oven Cooking Project Manual Unit 1. Encourage youth to apply math principles while doing their Dutch oven project. Youth may rely on the list when starting out, but as they become experienced they will refer to it less and less. In some recipes, proper measurements are critically important, and in others they are less important. Encourage youth to use proper measuring techniques to build a strong cooking/food preparation skill base.

Measuring Equivalents

3 teaspoons = 1 tablespoon
4 tablespoons = 1/4 cup
5 tablespoons + 1 teaspoon = 1/3 cup
8 tablespoons = 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 = 1/4 pound
8 ounces = 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

Bright Idea

If a youth has little experience with food preparation or cooking, consider sharing the following information. Measuring cups and spoons are used as cooking aids to measure dry and liquid ingredients. Explain that liquid and dry ingredients have different characteristics, so different types of measuring cups and spoons are used for greatest accuracy. Show the member a clear measuring cup with a pouring spout opposite the handle and explain that clear cups typically are used to measure liquids.

Next, show the youth a set of stackable metal or plastic cups, and explain that these cups often are used to measure dry ingredients. After telling him/her that measuring cups and spoons help to measure ingredients, explain that because liquid and dry ingredients have different characteristics cooks use different types of measuring cups and spoons for greatest accuracy.

Measuring liquids in stackable cups is possible, although it is not as accurate or easy. Demonstrate by pouring water into a stackable cup. Show how difficult it is to transfer the entire amount of liquid, from the cup to your mixing bowl, without losing some water. In certain recipes, inaccuracy in ingredient amounts can cause a recipe to fail.

History of Dutch Oven Cooking

The Dutch oven, as it is now known, was once called the black pot or cooking cauldron. These pots have a long history in America that dates back to 1620, when the Pilgrims cooked with them by hanging the pots from the beams of ships. Cooking this way was easier because the contents of stationary pots tend to slosh around with the movement of waves.

For centuries, the Dutch oven has been a favorite of serious cooks, and it is now returning to popularity because of the tasty food it produces.

Background Information

The term *Dutch oven* has been applied to a variety of cooking pots, kettles, and ovens over the years. While the term's origin is uncertain, there are a few theories:

1. John G. Ragsdale, a chronicler of Dutch oven history, suggests that the term may have derived from the original Dutch process for casting metal pots. In 1704, a man by the name of Abraham Darby traveled from England to Holland to inspect a Dutch casting process by which brass vessels were cast in dry sand molds. Upon returning to England Darby experimented with the process and eventually patented a casting process using a better type of molding sand as well as a process of baking the mold to improve casting smoothness. Darby eventually began casting pots and shipping them to the new colonies and throughout the world.
2. Others have suggested that early Dutch traders or salesmen peddling cast iron pots may have given rise to the term.
3. Still others believe that the term came from Dutch settlers in the Pennsylvania area who used similar cast iron pots or kettles.

To this day the term *Dutch oven* is applied to various cast pots or kettles. The most common application of the term includes any flat-bottomed cast iron pot/kettle whose three legs prop the vessel above the coals, and that also has flat sides and a flat, flanged lid that can hold coals. These ovens have a steel bail handle attached to "ears" on each side of the oven, near the top for carrying.

Other ovens, like cast aluminum and cast iron pots or kettles with rounded lids, flat bottoms, and no legs, may also be called Dutch ovens.

Source: John G. Ragsdale. *Dutch Ovens Chronicled: Their Use in the United States*. Fayetteville, AR: University of Arkansas Press, 2015.

Bright Idea

Share this information on the history of the Dutch oven with the youth you are helping. Afterwards, divide the youth into teams of two or three and have them come up with an alternate name for the Dutch oven. Have them present their new name to the group and explain why they chose the name.

Using Different Methods of Cooking

Background Information

Many cooking methods may be used with a Dutch oven, including roasting, frying, braising, stewing, and baking. In addition, some recipes may require simmering or boiling. A different distribution of heat is needed to accomplish each cooking method, and this is achieved by either adding or taking away coals from the top or bottom to redistribute the heat. As previously discussed, multiply the diameter of your Dutch oven by 2 (e.g., for a 12-inch oven, 12 x 2 = 24 coals) to calculate how many coals you need to achieve a 325°F temperature and distribute them using the "3 up, 3 down" method for an even top and bottom heat. The following is a guide to adjusting the heat for each cooking method:

Roasting – Roasting can be accomplished by using the standard "3 up, 3 down" distribution, but move 6 coals from the bottom to the top instead of 3. To seal in the juices of meats, roast at a high temperature for a shorter cooking time. A higher cooking temperature can be accomplished by adding two coals (1 on the top and 1 on the bottom) for every 25°F. The heat should be kept constant to provide browning, crust, and moisture retention.

Frying – Frying requires most of the heat to come from the bottom, rather than being evenly distributed. Arrange the coals so that all coals are on the bottom. Use the same number of coals as the diameter of the oven. For a 12-inch oven, place 12 coals underneath the oven. Frying is usually done at a higher cooking temperature, so add one additional coal for every 25°F increase in temperature above 325°F.

Braising – Braising is much like roasting except a small amount of water or oil is used for a moist heat. Braising is typically done at a lower temperature then roasting, so start with the standard "3 up, 3 down" coal distribution (and, like roasting, move 6 instead of 3), and keep the temperature closer to 325°F or 350°F.

Stewing, Boiling, and Simmering – These cooking methods are similar. They all involve cooking with a good amount of liquid and then heating it to a desired temperature to produce a low simmer through a rolling boil as needed for the recipe. Like frying, arrange all coals on the bottom and use the same number of coals as the diameter of the oven. For a 12-inch oven, place 12 coals underneath the oven and then adjust the number up or down to reach the desired level of simmering or boiling.

Baking – As previously discussed, place the majority of the coals on the top of the oven. To bring a 12-inch oven to 325°F, arrange 6–8 coals on the bottom and 14–16 coals on the top. For even baking, check every 10 minutes to rotate the oven and lid and rearrange coals top and bottom as needed. Don't forget to remove all bottom heat two-thirds of the way through the baking time.

The various Dutch oven cooking methods discussed above can be successfully used with the techniques listed below:

- Stacking Dutch ovens works well with roasting, where equal amounts of coals are on the top and bottom of the oven. This allows for even heating, since both surfaces are touching each other in the stack. Consider using stacking for meats, poultry, or pork. Desserts, such as cobbler, would be fine to start stacked, then taken out of the stack to finish cooking with only coals on the lid.

- Baking in a pan inside the Dutch oven works well when using foods that require baking. More delicate yeast batter or doughs and desserts would benefit from a pan inserted inside a Dutch oven because it makes the finished product easier to lift out and serve.
- Cooking with a tripod is a great method for boiling foods. Adjust the distance of the oven from the heat source by raising or lowering the oven, according to the amount of heat desired.
- Cooking on a propane camp stove makes it easier to control both oven heat and stability when frying foods. Because it is easy to spill hot oil when frying, placing the Dutch oven on the secure camp stove helps to reduce the risk of a burn. However, with this method of cooking, the oven gets too hot on the bottom for breads. Use the baking method for raised breads.
- Use a metal trivet or uniform-sized rocks in the oven to raise the inserted pan from the bottom of the oven to allow for circulation and raise it slightly from the heat.

Activity

To practice methods of cooking, ask a few youth to use cold briquettes to set up four numbered stations to demonstate the types of cooking: roasting, frying and boiling, baking, and simmering and stewing. Provide a sheet of paper listing the methods of cooking and ask the other youth to match the method with the number on the display ovens. To challenge the youth, ask them to list the food items or dishes best suited for each cooking method.

Adjusting and Managing Cooking Temperatures

Background Information

Using the two-thirds' temperature control technique will help prevent foods from getting too dark or well done on the bottom. This can occur when cooking in a Dutch oven, just as it can in a conventional oven when a baking dish is placed too close to the heat element. By removing the source of heat on the bottom and leaving the source of heat on the top of the Dutch oven, baking will continue but the heat source is not as direct. Remember that foods high in sugar and fat will brown more quickly.

Targeting Life Skills (Critical Thinking, Reasoning)

In Dutch Oven Cooking Project Manual Unit 2, an example of using the two-thirds' timing of temperature control is given for baking breads. Have a conversation with project participants regarding why this technique is recommended and what other foods or dishes would be best prepared using this technique. Remember to ask open-ended questions. Typically, open-ended questions allow for more than one possible answer and do not result in an "either/or" solution. They also allow for more critical thinking and provide an opportunity for the respondent to share how or why they came up with their response. Here are some sample questions to use to lead participants through the reflect/apply process of experiential learning:

- Why is this temperature control method suggested for baking breads?
- Why would you want to use full heat on the bottom for less than the standard time with sourdough and sweet breads?
- What other types of foods or dishes would benefit from this type of temperature control? Why would you recommend this?
- Besides baking, to what other cooking methods could this type of temperature control be applied?

Bright Idea

As stated in Dutch Oven Cooking Project Manual Unit 2, foods high in liquid will take longer to cook at high altitudes because the lower boiling point of water means that the food takes longer to achieve doneness. Maintaining the cooking temperature for a longer period may require adding more coals over time as the coals begin to burn out or lose their heat. Have a conversation with project participants to strategize how they will manage this process. Again, use open-ended questions to stimulate the conversation.

- How do you know when the cooking temperature has dropped too much?
- How do you know how many coals to add? Would you add the coals on the top, bottom, or both? Why?
- What is the best strategy for having additional hot coals ready to add?

Dutch Oven Recipes

There is an abundance of Dutch oven recipes readily available in addition to the recipe book available with this project. For this reason, you will most likely be able to find a recipe for most anything you would like to make in your Dutch oven. Many people have their favorite slow cooker or conventional oven recipe and may want to use it with their Dutch oven. As described in Dutch Oven Cooking Project Manual Unit 2, some experimenting may be needed with temperature, cook time, and amount of liquid required.

Consider having a conversation with the project participants concerning why these three elements of cooking will need to be adjusted. Why would a slow cooker recipe need to be adjusted more than a conventional oven recipe?

Activity

Ask each participant to bring a recipe that was written to be used with a slow cooker and a recipe that was written to be used with a conventional oven. Ask participants to work together in pairs to complete the following tasks:

- For each recipe, write down the temperature called for in the original recipe, then write down how you would heat your Dutch oven to that temperature. Hints: What size Dutch oven are you using? What temperature are you trying to reach? How many coals on top? How many coals on the bottom? What type of cooking are you doing (baking, roasting, steaming, boiling)? Does your distribution of coals change based on the type of cooking?

- For each recipe, write down the cooking time called for in the original recipe, then write down how long you would estimate it will take to cook in the Dutch oven. Hints: How soon before the estimated cook time would you check for doneness? How often would you check the dish after the first time you looked? How do you know when it's done?
- For each recipe, write down and total the amount of liquid called for in the original recipe, then write down how you would adjust the recipe. Hints: Is it a recipe in which you would add more liquid before you begin cooking? Would you add more liquid throughout the cooking process? How much liquid would you add?

Throughout this activity, remind the participants of the importance of writing down adjustments and the end results on the recipes that they use. The next time the recipe is used, they can use their notes and the revised recipe and adjust again if necessary to achieve more desirable results.

If you have time, have the participants prepare and cook the recipes they have chosen to convert. How close were your estimates? What would you do differently next time?

Baking Yeast Breads

Background Information

Before baking yeast breads, youth can gain a sense of accomplishment by mastering the proper browning and single rise of quick breads. Managing yeast bread is challenging. It takes skill to incorporate yeast, either dry or wet, into a recipe. The batter and kneading techniques also require a bit more patience than those for quick breads. For these reasons, assign youth a quick bread project first before one involving a yeast bread.

Background Information

Yeast breads contain the basic ingredients of flour, yeast, and water.

- *Flour* provides density and gluten, which gives stretch to the dough.
- *Yeast* is a live single-cell fungus that uses sugar from the flour to grow when combined with warm water, a process that creates carbon dioxide bubbles that add height to the bread.
- *Water* helps to bind the ingredients and adds moisture for the yeast to grow.

All other ingredients, such as sugar, oil, salt, and eggs, are dough enhancers. These foods add to the texture, flavor, smooth consistency, crust development, and browning of breads. Grains used in the recipes are part of a healthy meal plan. Grains provide B vitamins, carbohydrates, fiber, and the calories necessary for healthy bodies.

Some people have a food intolerance to a protein in flour called gluten and must follow a gluten-free diet. An allergy to wheat can also require following a wheat-free diet.

Tips for success:

- To allow room for yeast bread recipes to rise, consider using a 12-inch-deep Dutch oven. The extra space will provide room for the second rise during baking. If a deep oven is used, an additional two coals will need to be placed on the lid during cooking.
- Use a pan placed on top of a metal trivet inside the deep Dutch oven. This lifts the bread off of the oven surface to help prevent overcooking.
- When placing coals under the Dutch oven, be sure to distribute them as evenly as possible to keep the dough level while baking and to help brown the bread.

Yeast Bread Preparation

Because bread is a basic meal item, teaching youth how to bake bread in a Dutch oven is useful and a popular pursuit. Indeed, baking requires skill, which builds with practice. Once youth are successful with quick bread Dutch oven baking, yeast bread techniques will be much easier to master.

There are two basic yeast doughs: batter and kneaded.

Batter breads are a quick method of bread making because they require no kneading. Kneaded breads require hands-on contact to incorporate the ingredients and to activate the yeast to grow.

Batter Bread

- The flour is mixed into the dough with a spoon or electric mixer.
- Batter dough will be stickier because there is more moisture in the recipe.
- The batter is spread into the Dutch oven instead of shaped into loaves.
- Just one rising time is usually needed.
- The bread dough will be coarser and may have a pebbled surface (small bumps).

Kneaded Bread

- The loaves will be uniform in shape with a rounded, smooth top.
- Crust will be golden brown, with the sides and bottom a lighter color.
- Inside, the bread is cream-colored.
- A soft, slightly moist, not crumbly or doughy texture is desirable.
- More than one rising time is needed.
- A slight, mild yeast flavor is normal.

Source: “Fantastic Foods,” www.youthlearningnet.org.

Activity

Select the yeast bread recipe best suited for your own experience, the needs of the youth group, and the setting. The companion recipe book provides several bread recipes. For ease of baking with beginners, start with a single Dutch oven.

Cinnamon rolls are a favorite choice and allow for several youth to help in the preparation. Because of the sugar content, using the pan-in-the-oven method (see page 27) or lining the oven with foil will help prevent sticking or burning.

Ask youth to share what they experienced when preparing the yeast bread recipe. Questions may include:

- What did you prepare and why did you choose that recipe?
- What happened to the product? Why?
- How did you feel about the experience?
- What was the most difficult? Easiest?
- What would you do differently next time?

Identify common experiences with the recipe preparations and what lessons can be learned. Focus on concepts that apply to life skills by generalizing the youth responses:

- Share something you learned about yourself from preparing this yeast bread.
- List how making decisions about yeast bread preparation may help you with making decisions in the future.
- Explain how you made your decisions.

Then apply the new concepts learned to everyday life, projecting them into future situations.

- Give an example of how something you learned today can apply to a future situation.
- How can any problems you experienced while preparing the yeast bread help you as a baker in the future?
- List a way you will prepare yeast bread differently the next time you bake bread in your Dutch oven.

Cooking Meat and Poultry

"How Would You Cook It?" Activity

Gather a couple of weekly advertisements from a local grocery store. Divide up the project participants into small groups consisting of two or three youth. Give each group one of the advertisements and provide them with the following instructions:

- Look at the weekly sales and choose three different cuts of meat that could be prepared in a Dutch oven.
- Identify which cooking method would be best for each type of meat.
- Share your findings with one other small group.

The project helper will need to move from group to group to help facilitate this activity. Anticipate questions regarding where the different cuts of meat are found on an animal or how much of each type of meat is typically purchased.

Background Information

After cooking the meat, remove it from the oven and give it time to rest before cutting and serving it. This is recommended because as meat is cooked, the proteins in the meat heat up and set (become firmer). The more cooked the meat, the more set the proteins will become. Allowing the meat to rest or to stand away from the heat before serving allows the juices, which have been driven to the center of the meat, to redistribute throughout the meat. As a result, the meat will shed much less juice than meat sliced immediately after cooking and will be far more tender and juicy to eat.

Resting meat after cooking is a fairly simple process. Take it from the Dutch oven and place it on a warm plate or serving platter. Cover the meat loosely with foil. If you cover it tightly with the foil or wrap it in foil, you will make the hot meat sweat and lose the valuable moisture you are trying to keep in the meat.

The time it takes for the meat to rest will depend on its size. Steaks or chops should stand for 3–5 minutes before serving. Most roasts should rest for 10–20 minutes before carving. Large roasts, like a turkey, should rest for 40 minutes.

Remember to cook meats to the correct internal temperature before removing them from the Dutch oven. Refer to the chart below for USDA-recommended cooking temperatures.

Safe Internal Temperatures	
Ground Meat & Meat Mixtures	
Ground beef, pork, veal, lamb	160˚F
Ground turkey, chicken	165˚F
Whole Cuts	
Beef, Veal, Lamb, Pork	
• Medium rare	145˚F
• Medium	160˚F
• Well done	170˚F
Poultry (all cuts)	165˚F
Seafood	145˚F

Activity (To Rest or Not to Rest)

Have project members prepare two cuts of the same meat (roasts, steaks, etc.) using the same cooking method. Once the cooking is complete, remove both pieces of meat. Cut one of the meats and serve immediately while setting the other piece of meat aside to rest. After it has rested for an appropriate amount of time, cut the second piece of meat and serve it to the group. Ask each member to write down which piece of meat they preferred and why. Ask some of the members to share their opinions with the rest of the group.

Cooking for Groups

Bright Idea

The three Ps refer to some tools that a helper can use to guide youth who are starting to cook for more than their family. When deciding to prepare a Dutch oven meal for a large group there are three Ps to always keep in mind: Planning, Purchasing, and Preparing. Below is information for youth to consider when cooking for a group. Use the planning sheets provided in Dutch Oven Cooking Project Manual Unit 2.

Planning: Write your Plan

- Determine how many people you will be serving.
- Determine a theme for the event (if appropriate).
- Determine how much help you will need.
  - Cooking for a group requires teamwork. Plan on having enough help for food preparation, watching the coals, watching and rotating ovens, setup, and cleanup. It is better to have a few extra individuals helping than not to have enough help.
  - Decide the number of ovens needed and who can provide them. (This is usually decided after the menu and meal count have been decided.)
  - Have a system to mark the Dutch ovens (perhaps use white chalk on top of the lid and side of the oven) with the owner's name so each can be returned in a clean and timely manner.
- Plan a menu.
  - Not everything needs to be made in a Dutch oven.
  - Keep nutrition and MyPlate guidelines in mind.
  - Simplify the menu. (Sometimes less is more.)
  - Consider the price of the food and the overall budget.
  - Consider food allergies or special requests that need to be accommodated.
- Determine how much food to prepare.
  - Use recipes designed for large groups, if possible.
  - A general guideline to follow regarding amounts of food: ½-pound uncooked meat per person, ¼-pound side dishes per person, 1 roll or slice of bread per person, and 2–3 ounces of dessert.
- Make sure the location meets your needs.
  - Will you have enough work space at the designated site?
  - Make sure that you will have access to clean water (both for cooking and handwashing).

Purchasing

- Make a grocery list. Ask helpers to review list and recipes to make sure that items are not forgotten.
- Review sale items. Determine the best location to purchase items (for example, a grocery store versus a wholesale store versus a restaurant supply store).
- Develop a budget. Estimate the cost of the menu and adjust where needed (for example, pork chops may be less expensive than beef tri-tip).
- Refrigerate or freeze perishable foods within 2 hours of shopping or preparing (1 hour if the temperature is over 90°F).

Preparing

- Assign team members specific tasks (refer to your plan). For example, Maria will be cutting up vegetables, while John prepares the coals.
- Learn about additional food-safety precautions.
  - Almost everything will take longer than you're used to, which means harmful microorganisms have more time to multiply. Because bacteria multiply very, very quickly, leaving raw chicken (for example) at room temperature too long can endanger a diner's health.
  - Wash hands with soap and water for at least 20 seconds before and after handling food (as well as after using the bathroom, touching pets, etc.).
  - Use a thermometer to check the internal temperature of meat, poultry, casseroles, and other food. Check the temperature in several places in each dish to be sure the food is cooked to a safe minimum internal temperature.
  - Never partially cook food for finishing later because it increases the risk of bacterial growth.

Timing

- Give yourself extra time.
- Start with the longest cooking items first (usually meat).
- Determine what can be made ahead of time.

Transporting Food

- If preparing food off site and transporting to meal location, follow USDA guidelines for food temperatures.
- Keep hot foods at or above 140°F (use insulated container).
- Keep cold foods at or below 40°F (use ice or frozen gel packs).

Dutch Oven Cook-Off

A Dutch oven cook-off can be a fun year-end culminating event! As a word of caution, remember that by its very nature, it is also competitive and not all youth are ready for competition. Participation in a cook-off is not a requirement for project completion. If you choose to hold a cook-off, you have several options:

- Organize the cook-off using the suggested rules and judging criteria outlined in Dutch Oven Cooking Project Manual Unit 2, and make participation optional.
- Offer a variation. Have two "classes," one with judges and an other, less competitive one in which all participants sample everyone's final products but do not necessarily judge them.
- Offer another variation. Create categories that recognize a cook's various strengths (for example, "best kitchen setup and maintenance," "best taste," "best food presentation," and "cleanest/safest prep area").

Targeting Life Skills (Stress Management, Managing Feelings, and Character)

Appropriately administered, a competitive cook-off provides many opportunities for youth to develop a variety of life skills, including stress management and building character. Before and during the cook-off, help youth recognize what they have learned, that they are doing their best, and will become better cooks next time. Model good sportsmanship and provide a safe social/emotional environment for youth to learn and to grow through competition.

With all that said, let's organize a Dutch oven cook-off! The rules and judging options given in Dutch Oven Cooking Project Manual Unit 2 present good guidelines to design your group's cook-off. As the group leader, if you decide to add to or change any of the rules be sure that is communicated well in advance of the cook-off. Also, be sure to communicate which judging option will be used.

Background Information

Judging - It is highly recommended that you select three judges from outside of your group to form a panel to prevent any appearance of bias or preconceptions. This approach ensures that the outcome will be more than one person's opinion and will break any tie that might occur between two judges. There are judging score sheets at the end of this Helper's Guide that may be reproduced for each of your judges. These score sheets match the judging criteria printed in Dutch Oven Cooking Project Manual Unit 1.

Appendix

Group Meal-Planning Worksheet Example

Name of Group: SLF Welcome Dinner

Group Contact: Nancy Shelstad

Date of Meal: November 10, 2006

Place Held: Old Town WIF grounds

Time to Start Meal: 3 PM

Time Meal to be Served: 6 PM

How Many to be Served: 100

Total Budget: $780.00

Menu:

- Beef Tri-Tip
- Green Salad with Dressing
- Rolls
- Ranch Beans
- Berry Cobbler
- Chocolate Cake
- Pineapple Upside-Down Cake
- Lemon Cake
- Lemonade
- Coffee

Budget your shopping list:

Menu Item	Budgeted Cost ($)	Actual Cost ($)
Beef Tri-Tip (60 lbs)	221.50	donated
Onion	1.00	donated
Garlic	1.00	donated
Apple Cider	3.00	donated
BBQ Sauce	2.00	donated
Steak Seasoning	2.50	donated
Oil	1.00	donated
Salad		
Salad Greens	10.00	9.00
Dressing	9.00	9.00
Croutons	3.00	3.00
Bacon Bits	3.00	3.00
Rolls (9 dozen)	15.00	donated

Ranch Beans		
Variety of Beans (14–28-oz cans)	14.00	14.00
Ketchup	3.00	3.00
White Vinegar	.50	donated
Brown Sugar	2.00	1.50
Dry Mustard	1.50	1.50
Worcestershire Sauce	.50	donated
Liquid Smoke	.50	donated
Garlic Powder	.50	donated
Bacon	2.50	2.50
Onion	1.00	1.00
Berry Cobbler		
Mixed Berries (4 pkgs)	25.00	20.00
Rolls (Refrigerated/Frozen)	4.00	4.00
Sugar	1.00	1.00
Cinnamon	1.00	1.00
Pineapple Upside-Down Cake		
2 Yellow Cake Mixes	2.00	2.00
Maraschino Cherries	2.00	2.00
Pineapple Slices	1.50	1.50
Chocolate Cake		
3 Chocolate Cake Mixes	3.00	3.00
Frosting	1.50	1.50
Lemon Cake		
2 Lemon Cake Mixes	2.00	2.00
Cream Cheese Frosting	1.50	1.50
Eggs (2 dozen)	1.50	1.50
Charcoal (4 bags)	10.00	10.00
Lemonade	5.00	6.00
Coffee	7.00	5.00
Rental for plates, flatware, cups, etc.	400.00	400.00

Cost Per Person (based on 100 people): $7.80 (budgeted); $5.23 (actual)

Number of ovens used – Identify what will be cooked in each oven and who will provide the ovens:

Menu Item	Number of Ovens and Oven Size	Team Member Providing
Tri-Tip	6 (14-in)	Claudia
Salad	None (bowl)	Claudia
Rolls	None (baskets)	Claudia
Ranch Beans	1 (17-in deep)	Jake
Cobblers	2 (12-in)	Tyler and Colton
Cakes	6 (12-in)	Claudia and Kirk
Lemonade	None (5-gal cooler)	Kirk
Coffee	None (coffeemaker)	Theresa

Chart out who is assigned to each menu item and when they need to start cooking:

Menu Item	Cook Assigned	Start Time
Tri-Tip	Tyler and Colton	4 p.m.
Salad	Lynne	Toss at 5:30 p.m.
Rolls	Connor and Mason	Set out at 5:30 p.m.
Ranch Beans	Dede	4 p.m.
Cobblers	Claudia and Jake	3 p.m.
Cakes	Claudia and Jake	3 p.m.
Lemonade	Theresa	Mix at 5:30 p.m.
Coffee	Theresa	Make at 5:00 p.m.

Group Meal-Planning Worksheet

Name of Group: _____ Group Contact: _____

Date of Meal: _____ Contact Phone :_____

Place Held: _____

Time Meal Started: _____ Time Meal Served: _____

How Many People to be Served: _____

Total Budget: _____

Menu:

_____

_____

_____

_____

_____

Menu Item	Budgeted Cost	Actual Cost

Number of ovens needed (identify what will be cooked in each oven):

Menu Item	Oven Size and Number Needed

Chart out who is assigned to each menu item and when they need to start cooking:

Menu Item	Cook Assigned	Start Time

At the conclusion of your experience cooking for a group, review the following with the cooking team.

1. Discuss the planned budget and the adjustments made to stay within budget.

2. What did you learn about planning and cooking time frames?

3. How did you use the MyPlate model to provide a nutritious, balanced meal?

4. What healthy cooking techniques did you use?

5. What would you do differently next time?

Dutch Oven Cook-Off Judging Score Sheet

Cook-Off Contestant _____

Judge _____

1. Cooking Process Food-Preparation Skills

0 1 Needs improvement and more practice	2 3 Some talent shown, can improve in some areas	4 5 Very skilled at preparing food

Food-Safety Practices

0 1 2 Needs help to learn better food-safety techniques	3 4 5 Knows basic food-safety ideas, room for improvement	6 7 8 Great food-safety practices shown

Cleanliness

0 1 2 3 Not very clean or sanitary	4 5 6 7 Adequate but not exceptionally clean	8 9 10 Very clean work and food-prep area

Personal Appearance/Appropriate Dress

0 1 2 Improper dress for Dutch oven cooking	3 4 5 Some dress violations were shown for Dutch oven cooking	6 7 8 Appropriately dressed, professional

Proper Tools and Techniques

0 1 2 3 Necessary tools not used	4 5 6 7 All tools present, techniques could use improvement	8 9 10 Proper tools and techniques shown

Time Management

0 1 2 3 Needs to learn better time management	4 5 6 7 Not all dishes completed on time, improvements could be made	8 9 10 Excellent time management, everything completed on time

Heat Consistency

0 1 2 3 No heat control	4 5 6 7 Room for better heat management	8 9 10 Great heat control

Cooking Process Total Score: _____

Cooking Process Comments:

2. Food Taste and Presentation

0 1 2 3 No flavor, bland, dry, over- or underseasoned	4 5 6 7 Adequate flavor, could use more seasoning	8 9 10 Great flavor, juicy, smells appealing

Doneness

0 1 2 3 Undercooked or overcooked	4 5 6 7 Could use a little more time to finish	8 9 10 Perfect, not undercooked or overcooked

Quality of Aroma

0 1 No appealing smell or aromas	2 3 Smell is somewhat appealing	4 5 Food smells great, makes you want to sample

Appetizing

0 1 Food does not look appetizing	2 3 Adequate but not particularly over the top	4 5 Variety of textures, flavors and attractively arranged

Temperature

0 1 2 Food not served at appropriate temperature	3 4 5 Foods served close to appropriate temperatures	6 7 8 Hot and freshly prepared food. Cold foods served cold.

Color of Food

0 1 Very limited color	2 3 Some color but improvements could be made	4 5 Colorful, adds to the food presentation

Garnish

0 1 No garnish or not edible	2 3 Some garnish but put together poorly	4 5 Appropriate edible garnish, enhances presentation

Neatness/Eye Appeal

0 1 Limited eye appeal	2 3 Adequate but not exceptionally attractive	4 5 Presentation is appealing

Creativity/Originality

0 1 2 3 Not very creative	4 5 6 7 Good idea but could be more creative	8 9 10 Original and extremely creative

Food Taste and Presentation Total Score: _____

Food Taste and Presentation Comments:

3. Difficulty (Judge's Discretion, Scored on a Scale 0–10)

Dishes made from scratch are harder, more time-consuming, and worth a high score. If a dish doesn't turn out or challenges present themselves, it's important that the contestant overcomes adversity and makes something positive out of it.

Difficulty Score: _____

Difficulty Comments:

1. Cooking Process Score: _____

2. Food Taste and Presentation Score: _____

3. Difficulty Score: _____

Total Score: _____

Concentration Game Instructions

The appendix of this Helper's Guide contains cards that may be used to play the game of Concentration. This can be a good way to fill time before a meeting starts or while food is cooking. This activity can be used for either level of this project and can be used many times.

Copy each page front/back so the Dutch oven term or image is on one side and the Concentration image is on the other. For best results, use card stock so the images and words do not show through the paper and laminate. Cut the cards in equal sizes.

To play the game, shuffle the cards so like images are in a random order. Deal the cards facedown in a single layer forming a square eight cards wide by six cards high. One player at a time will turn over two cards, one card at a time, trying to find two cards that have matching images or terms. If the two cards match, the player keeps both cards and tries to find another match. If/when the two cards do not match, turn both cards facedown again and the next player takes a turn. Continue playing until players have matched all the cards. The player with the most pairs of cards wins the game.

To add learning in the game, when a player finds a match, the player needs to identify the image and tell what it is used for or tell what the term means to keep the pair. This can be a good review for youth new to the project.

Dutch Oven Concentration	Dutch Oven Concentration	Dutch Oven Concentration
Dutch Oven Concentration	Dutch Oven Concentration	Dutch Oven Concentration
Dutch Oven Concentration	Dutch Oven Concentration	Dutch Oven Concentration
Dutch Oven Concentration	Dutch Oven Concentration	Dutch Oven Concentration

Make four copies of this page on separate sheets of card stock

On the opposite side of two of the card stock sheets printed with the Concentration logo, make two copies of these images.

briquettes	charcoal	baking temperature
bottom heat	top heat	fire safety
Dutch oven	rancid	coals
unseasoned	pre-seasoned	chimney

On the opposite side of two of the card stock sheets printed with the Concentration logo, make two copies of these images.

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