Dry Cooking Methods

Unit: Preparing Foods

Problem Area: Food Preparation

Lesson: Dry Cooking Methods

Student Learning Objectives.

Instruction in this lesson should result in students achieving the following objectives:

1. **Analyze dry cooking methods.**
2. **Evaluate suitable foods for dry cooking.**

Resources.

The following resources may be useful in teaching this lesson:

E-unit(s) corresponding to this lesson plan. CAERT, Inc. http://www.mycaert.com.

Alfaro, Danilo. "Basic Cooking Methods," *About.com: Culinary Arts*. Accessed Aug. 26, 2013. http://culinaryarts.about.com/od/cookingmethods/a/dryheatmoist.htm.

Gisslen, Wayne. *Professional Cooking*, 7th ed. Wiley, 2010.

"Guide to Dry-Heat Cooking Methods," *H-E-B*®. Accessed Aug. 26, 2013. http://www.heb.com/page/recipes-cooking/cooking-tips/dry-heat-cooking.

Humphries, Carolyn. *How to Microwave: The Good Cook's Guide to Best Microwave Practice*. Foulsham & Co. Ltd., 2009.

Labensky, Sarah R., Priscilla A. Martel, and Alan M. Hause. *On Cooking: A Textbook of Culinary Fundamentals*, 5th ed. Prentice Hall, 2010.

McGee, Harold. *On Food and Cooking: The Science and Lore of the Kitchen*. Scribner, 2004.

Equipment, Tools, Supplies, and Facilities

- ✓ Overhead or PowerPoint projector
- ✓ Visual(s) from accompanying master(s)
- ✓ Copies of sample test, lab sheet(s), and/or other items designed for duplication
- ✓ Materials listed on duplicated items
- ✓ Computers with printers and Internet access
- ✓ Classroom resource and reference materials

Key Terms.

The following terms are presented in this lesson (shown in bold italics):

- baking
- barbequing
- broiling
- deep-frying
- denatures
- dry cooking methods
- grilling
- magnetron tube
- microwave cooking
- panfrying
- roasting
- sautéing
- searing
- smoking
- spit roasting
- stir-frying

Interest Approach.

Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

> *There is no more common and versatile meat than chicken, and everyone has a favorite way of preparing it. Ask students to take out a sheet of paper to write down their favorite chicken dish. One by one, ask each student to read his or her choice aloud. Every time a dish is mentioned for the first time, write it on the board. Review the dishes that have been listed, and ask students if they can specifically identify the cooking method for each. If most responses are "fried chicken," ask for the cooking method anyway. When you hear "it's fried," insist that the answer is insufficient. Expect confusion over this. If too many student responses are the same, mention some options of your own, such as Chicken Chow Mein, Jerk Chicken, Chicken Wellington, Chicken and Dumplings, Chicken and Noodle Casserole, etc. Finally, ask the class a simple question: Which chicken cooking method is the right one? (Answer: It depends.)*

CONTENT SUMMARY AND TEACHING STRATEGIES

Objective 1: Analyze dry cooking methods.

Anticipated Problem: What makes a cooking method dry?

I. ***Dry cooking methods*** are techniques used with better cuts of meat with little connective tissue—often with ample fat content—that quickly become tender when cooked. Dry heat methods are roasting, baking, barbecuing, broiling, grilling, sautéing, panfrying, stir-frying, and deep fat frying. (Deep fat frying is sometimes considered a category of its own.)

A. Roasting and baking methods are conducted by cooking food uncovered in an oven (dry heat) with little or no liquid added. They are essentially the same process, except that roasting usually refers only to meat.

1. ***Roasting*** is a dry-heat cooking method often used for large pieces of meat. Traditionally, roasting implied that the meat was cooked over an open fire or on a spit—open roasting. Meat to be roasted is usually placed fat side up in a shallow pan and is left uncovered. Placing the fat side up is a self-basting technique to keep the meat moist. Early recipes called for large roasts to be placed in a very hot oven (400°F and above) to sear the meat. Then the temperature is decreased for the remainder of the cooking. Today, most recipes call for a constant and moderate temperature for roasting meats—250° to 375°F. Roasting generally requires a longer cooking period than baking, such as 45 minutes to several hours.
   a. Classic roasting suggests that the meat is placed on a V-shaped rack (inside a pan) or on a variety of freshly cut vegetables (mirepoix). In both cases, the meat is raised off the surface of the pan.
   b. Roasting is conducted in a pan with the heat source many inches under the food, thereby effectively heating the air that surrounds the food.
   c. ***Spit roasting*** (considered true roasting) is a technique in which a revolving spit or rôtisserie rotates the meat in front of or over a "fierce" heat.
   d. ***Searing*** is a cooking method of short duration, in which foods are placed on an extremely hot flat surface to be browned quickly. Searing seals the surface of the food and adds flavor from the surface browning and caramelization. Searing is a first step in the roasting process. For some foods, searing may be the full cooking procedure.
2. ***Baking*** is a technique that involves cooking small pieces of meat and/or other foods. Baking differs from roasting in a few ways.
   a. Baking is conducted in an oven at a moderately high temperature (325° to 350°F, though bread is often baked at higher temperatures) for a relatively

short period of time—typically less than 40 minutes, though there are exceptions.

b. The heat source is not just under the food (as for roasting) but is several inches under the food. The hot air in the oven cooks the food instead of using a more direct exposure to the heat source.

c. Juices released in the cooking process remain in the baking pan or tray.

3. ***Barbequing*** is the cooking of tender meats and other foods over heat generated from hardwood or charcoal rather than flame. However, some barbeque recipes are completed in an oven. Barbequing may or may not include a grill or a grilling step. However, this technique uses something not present in other dry heat methods: the addition of a rub applied at the beginning of the cooking process and/or barbeque sauce applied toward the end of the cooking process.

   a. Barbequed meat can be produced in an oven or a smoker unit with no grilling step.

   b. Barbequed foods are always highly seasoned because of the rub or sauce applied; grilled foods alone have no general rule about seasoning.

B. Broiling and grilling were probably cooking methods used by ancient people. On many menus, broiling and grilling are synonymous. However, nuanced differences exist between these methods. Broiling is typically conducted under a hot coil, and grilling is conducted over a hot coil, over embers, or on a flat-top surface. In both instances, intense heat forces the blood to run away from the heat source. Also, broiled and grilled meat must be turned during cooking to ensure even doneness. Tender cuts of meat are best for broiling and grilling.

1. ***Broiling*** is a direct heat method of dry cooking—usually under a hot coil unit in an oven—as opposed to roasting and baking, which cook by means of heated air. Broiling generally does not offer a range in temperature—typically 500°F—but the broiler rack is movable, allowing for distance variance between the flame and the food. In general, thick foods are placed farther from the heat source than thinner foods. Broilers should be preheated before use, and the broiler pan should be brushed with oil as the oiled food is placed on the pan.

   a. Broiling can be conducted in the oven by direct flame sources, electric coil broiler, or by infrared element.

   b. Broiler pans usually are fitted with a drip tray or other device for juices and fat to collect beneath the food as it cooks. This is primarily to prevent flame flair ups and potential fires from occurring due to dripping fat exposed so close to direct heat sources.

2. ***Grilling*** is a direct heat method of dry cooking that requires food to be cooked directly over an open flame or other heat source. The grill is preheated, and oiled food is placed directly on open grates with no pans or trays between the food and the heat source. To prevent sticking, grilled food is usually brushed with or dipped in unseasoned oil or fat before being placed on the hot grill surface. The grill is brushed with oil just before use.

a. Grilling on a grate allows juices and rendered fat to drip off the cooking food directly onto the heat source below, creating smoke and fire flare ups that affect food flavor in a desirable manner.
b. Food with minimal fat can be grilled with good results, often with fat added in the form of marinades or by basting during cooking.

C. Frying can be conducted in several ways. Each method is a variation of the others, and they all share the common nature of cooking foods in fat over a heat source. Most frying processes vary based on the amount of fat used in the cooking procedure. Remind students that frying in any form is a dry cooking method. Confusion can occur because students may see oil as a "liquid" and, therefore, not a dry cooking method. Make a specific note that fat in any form—liquid or solid—is the molecular opposite of water and water-based liquids; they do not mix and have nothing in common, even if they are both liquid in appearance. Reinforce this concept by reminding students that if they dip their fingers in water, their fingers feel wet; if they dip their fingers in oil, their fingers feel greasy rather than wet.

1. ***Sautéing*** is a method that involves frying lightly and quickly in a small amount of fat over very high heat. Sautéing usually occurs in a heavy-bottomed flat pan with flared sides; the flared sides assist with flipping food in the air. Only tender cuts of meat are sautéed. Most sautéed meats are thinly sliced and require very little cooking. Sautéing is completed uncovered.
   a. Sautéing requires the food to be moved almost continuously, but the food does not need to be cut into small pieces. Also, it is not "stirred." Large flat pieces of food can be sautéed with a constant "jiggling" of the pan to keep it in motion as it cooks, with the food being flipped in midair or turned with tongs.
   b. Sautéing is designed for fast cooking of relatively small quantities of food. It resembles stir-frying.
2. ***Stir-frying*** is a method that involves quickly cooking small, uniformly cut pieces of food in a large pan or wok over very high heat in a small amount of fat, while constantly stirring the food. The heat source is directly under the pan or wok. Uniformity of food size is critical to ensure that all foods cook at the same rate. Stir-frying is a cooking method designed for quick cooking. It conserves energy and food nutrients.
3. ***Panfrying*** is a method used to cook in hot fat on the stovetop in a pan with tall straight sides to hold the food and the fat. Panfrying differs from sautéing and stir-frying primarily in the amount of fat required. The fat level in the pan typically would reach halfway up the food being cooked and generally never more than 1½ or 2 inches deep. The fat level helps prevent a crust from forming on the bottom of the pan. In panfrying, the heat source is always directly beneath the pan. Chicken is often cooked via the panfrying method.
   a. The temperature range for panfrying is typically 325° to 350°F, with temperatures below this range producing poor results (greasy food). Higher temperatures may result in fire.

b. Panfrying requires more care and more control due to continual turning of foods and controlling of heat (compared to deep frying and sautéing).
c. It is a misnomer to believe that panfrying is healthier than deep-frying because the food is not submerged in fat. In fact, panfrying can take longer to cook foods, and the temperature of fat is harder to regulate on a stovetop than in a deep fryer. Also, it is often a less healthy choice than deep-frying in terms of fat absorption.

4. ***Deep-frying*** is a method in which an item is French-fried in deep fat or oil. When cooking foods submerged in hot fat, it is common to hear the expression "swimming" related to deep-frying, as foods are allowed to freely move about in a substantial quantity of oil as they cook. The heat source is directly under the pot or unit holding the fat. The density of oil makes it a great conductor of heat, and deep-frying is a fast and effective cooking method.
   a. Temperatures for deep-frying are high, between 325° and 375°F. Frying below this range often results in greasy foods. Yet frying above these temperatures may result in burning the oil and starting a fire.
   b. Cooking in small quantities is always recommended. Adding too much food at once (especially frozen food) to a deep fryer drops the set temperature dramatically. Poorly cooked, greasy food is the result.
   c. Oils specifically formulated for deep-frying are essential, specifically those with high smoke points (the temperature at which oil begins to burn) and those designed for heavy and repeated frying usage. Peanut, canola, and soybean are common oil choices as their smoke points are between 400° and 500°F.

D. Other dry heat methods

1. ***Smoking*** is a process of adding flavor, cooking, or preserving food by exposing it to smoke from wood or other plant materials. Smoking is generally considered a dry cooking method, even though moisture may build up in the smoking unit because of the food itself cooking or from a container of water placed in the smoking unit to keep food moist during long smoking procedures.
   a. Smoking takes place in enclosed units with racks to hold meat. Two types of smoking are no heat (cold smoking) and low heat (heat smoking). Smoldering wood is placed at the bottom of the unit. As a result, smoke fills the unit and encompasses the food placed on the racks inside. Both the cold and the low heat processes are slow. Typically, it takes many hours, depending on the weight of the meat being smoked.
   b. Cold smoking food is essentially a flavoring tool for food. It requires no cooking or uses food that has been "cooked" by wet or dry salt brining before smoking. In this case, the brine ***denatures*** (modifies the molecular structure) the proteins and "cooks" the food.
   c. Low-heat smoking cooks and flavors the food at temperatures between 150° and 250°F. The low heat slowly cooks food as it is flavored by the surrounding smoke, taking as long as a full day to complete the cooking for large pieces of meat.

2. ***Microwave cooking*** is the heat produced by the absorption of microwave energy by water molecules in food. A microwave is a special oven unit in which a ***magnetron tube*** (a diode vacuum tube in which the flow of electrons is controlled by an externally applied magnetic field to generate power at microwave frequencies) in the top of the oven rotates and showers the food with microwaves. The waves produce no heat, but they are absorbed by matter that contains moisture. The molecules of moisture in the food react to the microwaves by moving rapidly enough to create heat (steam) within the food, thus cooking it from the inside out.
   a. Microwaves do not affect materials that contain no moisture.
   b. The microwave shower occurs in a pattern that can leave "cold" spots in food. Even in units that have revolving turntables, it is advisable to turn the food or stir the food one or more times during the cooking process to ensure even cooking.
   c. Certain cooking effects, such as browning, cannot be accomplished by microwave ovens because they create no heat. Special cooking plates can be used in microwave ovens to simulate the browning effect of heat cooking.
   d. The manipulation and use of moisture already in food can leave foods dried or burnt if they are not cooked properly in a microwave oven. For example, food should be covered to keep moisture from escaping, and the power level of microwave energy emitted can be manipulated during cooking.
   e. Paper, plastic, and glass are acceptable containers or coverings in microwave ovens, but all metal items must be avoided to prevent sparks, shocks, and fire in the oven.

Teaching Strategy: *Use VM–A, VM–B, and VM–C to review dry cooking methods. Assign LS–A.*

Objective 2: Evaluate suitable foods for dry cooking.

Anticipated Problem: Which foods are suitable for dry cooking methods? Why?

II. Foods suitable for dry cooking methods

   A. Roasting is best suited to large pieces of meat and hard root vegetables. The long cooking time browns the sugars in the vegetables and the proteins in the meat. Roasting works well with lean meat (e.g., beef round roasts, pork loin, beef sirloin roast, and top round) if some liquid has been added to the pan to keep the meat moist and tender. Roasting has even better results with meat that has a moderate amount of fat, such as poultry, beef, and lamb. As a result of the long roasting process, the fat renders and "bastes" the meat as it cooks. The results are tender and flavorful. This is exceptionally true when spit roasting chicken, beef, and pork roasts as well as meat for gyros.
      1. Fruits are not roasted.

2. Delicate vegetables, such as leafy greens, are not roasted.
3. Fish and seafood generally are not roasted; they get tough and dry from this cooking technique.

B. Searing is considered an "incomplete" cooking method because it does not cook food to a safe degree of doneness. However, it may be used with most any food as part of a multistage cooking process to brown the outside of the food. Beef, veal, pork, chicken, lamb, and firm fruits and vegetables can be seared. Moreover, searing is the required first step in braising and stewing—moist cooking methods designed to tenderize tough meat (e.g., chuck roast, brisket, and lamb shank).
   1. Thick cuts of fish and seafood (e.g., scallops) can be seared. Sometimes they are served rare or even raw in the center after searing, or they may be cooked to completion via another method. Thin cuts of fish are too delicate for searing, but the technique can be used to "blacken" fillets with appropriate spices.
   2. Seafood does not sear well for several reasons, including the shells, outer skeletons, and delicate nature. Seafood tends to become rubbery or fall apart under the high heat needed for searing. (Thick scallops are an exception.)
   3. Foods high in sugar or starch can be seared with great care (to prevent burning).

C. Baking is a suitable cooking method for almost any food, with a few caveats. Obviously, most "bakery" goods are appropriate for baking, so address non-bakery goods for this section.
   1. Meat, fish, and vegetables must be naturally tender to be appropriate for baking. Tough meat and very hard vegetables will not tenderize sufficiently in the short cooking time associated with baking. (Throughout the rest of this objective, tough cuts of meat should be accepted as brisket, flank steak, ribs, pork shoulder, chuck and Boston roasts and steaks, any kind of shank, picnic ham, stewing chickens, similar cuts of lamb, and most game meat).
   2. Baking generally does not crisp food surfaces, and it does not add great color because of the brief cooking time and the moderate oven temperature.
   3. Fish, pork chops, and chicken are well suited to baking because they are tender and relatively "flat." Roasts of any kind—beef, veal, and some hard and dense root vegetables—are inappropriate for baking for the opposite reasons.

D. Grilling is suitable for most food that withstands high heat and is naturally tender or has been precooked or marinated to tenderize it prior to grilling. The food best suited for grilling has sufficient fat levels to remain moist and tender during the cooking process. This includes most poultry, beef, lamb, pork chops, steaks, seafood, and meaty cuts of fish (e.g., salmon, swordfish, tuna, and halibut).
   1. Many fruits and vegetables are suitable for grilling. They must be firm enough to hold up under the high heat of grilling and when placed on grates. Delicate vegetables (e.g., asparagus) can be successfully grilled if soaked in water prior to grilling to stave off burning. Even leafy vegetables can be briefly grilled to good effect if they are left "whole" rather than broken into leaves. For instance, small heads of romaine are ideal because they are crisp enough to hold up. Iceberg is unsuitable due to its shape and composition, and delicate

greens would burn too easily if grilled. Fruits need to be firm enough to hold up, and all fruits need to be watched carefully to avoid burning due to their high sugar levels.

2. Marinades are useful in grilling. They add flavor and moisture to food and tenderize it prior to grilling. Marinades are typically made of oil, an acid (e.g., vinegar or citrus juice), herbs, and spice. Salt and sugar are often used in marinades because both help tenderize food and add flavor.

E. Broiling is best suited for thinner foods (e.g., fish, steak, chops, and chicken). The high heat against the surface adds color, texture, and flavor in the form of browning. The thickness of the food is directly relevant to its suitability. For example, a roast would burn on the outside long before the center would be cooked using this method.

1. Because of the relatively short cook times and the high heat involved, tender foods are essential choices for broiling. This method does not lend itself to tenderizing food during the cooking process.
2. Food in which brownness and specific surface texture are desirable are suitable for broiling, along with food in which melting is desirable, such as cheese-topped items. This would include food cooked in other manners, such as something topped with cheese or crumbs and briefly put under a broiler for the browning/melting effect just before service. Traditionally, this can be a great finishing technique for vegetables that may otherwise be inappropriate for broiling because they are too dense, need too much moisture, or have too much sugar in them. Too much sugar would cause premature burning in high heat broiling.
3. Broiled food must contain a sufficient amount of fat, but not so much that fire flare ups could occur. Insufficient amounts of fat or moisture in food being broiled can result in burned or overly dried areas.

F. Sautéing is a viable cooking method for virtually any tender food. Meat and fish sauté well when cut relatively thin; thick pieces or roasts do not sauté well. Fish, seafood, chicken, vegetables, tender cuts of pork, veal, and beef sauté well. Sautéing is not appropriate for any tough cuts of meat (such as those with large amounts of connective tissue, gristle, and fibrous tendons) because they will not tenderize in this quick cooking method.

1. Grains, such as rice and dried pasta, can be sautéed prior to cooking by a moist method. Conversely, fully cooked rice and pasta can be sautéed prior to service, including rice and perogi dumplings.
2. Fruit can be sautéed. Soft fruit, such as berries, will break down quickly and become mushy, which is appropriate if a sauce is being prepared. Firmer fruit (e.g., apples, pineapples, and pears) softens and commonly caramelizes during the high heat sauté process. Sautéed fruit could be turned into compote, used as a topping for cake or ice cream, or used as the starting point prior to another cooking method for the final product.

G. Stir-frying is suitable for most any tender food, including pork, chicken, beef, seafood, and vegetables.
    1. Food must be cut into small pieces for proper and even cooking.
    2. Food must be naturally tender, but it must be strong enough to hold up under stirring without breaking apart. Seafood (e.g., shrimp, crab, and lobster) holds up better than fish during stir-frying. In contrast, fish tends to become flaky and break apart during the rapid style of the stir-fry process.
    3. Stir-fried vegetables should be served crisp and should be able to hold up to high heat without becoming too soft. For example, celery, peppers, bamboo shoots, and bok choy work well. Softer vegetables (e.g., bean sprouts, tomatoes, and pea pods) must be added at the last minute to prevent overcooking. Hard root vegetables (e.g., potatoes, beets, and turnips) require prior cooking to soften them before adding to a stir-fry.
    4. Browning and crispness are not a resulting element of stir-frying.

H. Deep frying and panfrying are two methods best suited to lean foods—such as a white fish—that are low in fat (not salmon or tuna that have a higher fat content). Also, chicken and turkey (not duck or goose because of high fat content), any meaty fruit or vegetable, some cuts of pork (chops or even tenderloin), and seafood (e.g., shrimp, clams, and scallops) are suitable for deep-frying and panfrying.
    1. Foods high in fat typically become greasy and off-flavored when fried. Exceptions are cheese (usually breaded and fried just long enough to brown the breading and melt the cheese) and chicken, which can be quite greasy if not fried properly, though some people like it that way.
    2. Tough cuts of meat (certain beef and veal cuts) and any meat that is not desirable when "well done" are not appropriate for frying. The nature of frying requires fully cooking foods. The required moisture to tenderize tough meat is not present in frying techniques.
    3. Frying may require a batter or breading on the food to provide a desired crisp crust. Mildly flavored food that benefits from flavorful coatings is best suited for frying. Starchy foods (e.g., potatoes) are suited for frying without any further breading or coating, though breading and coating may be used with potatoes.
    4. Food high in sugar is typically unsuitable for frying because it may brown and burn before becoming fully cooked. Fried bakery items are usually low in sugar, with glazes and sugars added after frying.

I. Barbequing is suitable to most foods that can be cooked on a grill, in an oven, or on a rôtisserie. Chicken, ribs, whole roasts (e.g., pork loin and brisket), and chops are favorites for barbequing.
    1. The strong flavors associated with barbequing are generally not suitable to fish because of its delicate flavor (though it can work with some seafood, including shrimp), and it is typically not used with most fruits and vegetables.
    2. Meat prized for its own flavor (e.g., quality steak) is not a candidate for barbequing because the rub or sauce would overpower the natural flavor.

J. Smoking is a specialty form of cooking that could be used with most any food. However, some food is not desirable when prepared in this manner. Smoking provides a very specific and intense flavor. Fruits and vegetables are seldom smoked because the smoky flavor masks the natural flavors of fruits and vegetables. However, they could be cold smoked. Mild flavored cheeses are smoked with great success using the cold smoking technique. Mild flavored meats—poultry, pork, and fish—are most commonly smoked using heat, as are sausages of all kinds.

   1. Beef can be heat smoked successfully. Most commonly, beef ribs, brisket, and sausages are smoked. Tough cuts would require many, many hours of smoking to become fully cooked and tenderized, making beef a less common choice for smoking.
   2. Bones processed during butchering are often smoked and sold as flavoring agents for soups and stews. Pork necks and backs are particular favorites. They offer little meat, but they are soft enough to absorb the smoky flavor without being so soft that they break apart in cooking (as chicken bones would).
   3. Smoked fish is prized for its special flavor, but it works best with high-fat fish (e.g., salmon, sturgeon, and herring).

K. Microwaving has a few primary uses: thawing frozen foods, reheating foods and beverages, boiling water and other liquids, and melting cheese over cooked food. It can be successfully used to cook vegetables. Also, with care, it can be used to cook fish and seafood, pieces of poultry, fruit, potatoes, rice, and tender pieces of beef, pork, and veal.

   1. Food must be cooked covered and stirred or turned during the cooking process.
   2. Food must have sufficient moisture to cook successfully. Liquid may need to be added to the cooking dish to prevent the food from drying out.
   3. Some microwave ovens include heating elements, allowing for heat and microwaves to cook the food. This is exceptionally useful when cooking large pieces of meat or whole chickens, where browning and crisping from heat is desirable, as is the speed of microwave cooking.

Teaching Strategy: *In addition to lecture and demonstration, use VM–D, VM–E, and VM–F to review foods suitable for dry cooking methods. Assign LS–B.*

- **Review/Summary.** Use the student learning objectives to summarize the lesson. Questions at the ends of chapters in the textbook may be used in the Review/Summary.

- **Application.** Use the included visual masters and lab sheets to apply the information presented in the lesson.

- **Evaluation.** Evaluation should focus on student achievement of the objectives for the lesson. Various techniques can be used, such as student performance on the application activities. A sample written test is provided.

Answers to Sample Test:

Part One: Multiple Choice

1. b
2. a
3. c
4. d
5. a
6. b

Part Two: True/False

1. F
2. F
3. T
4. T
5. F
6. F
7. F

Part Three: Completion

1. reheat (or thaw)
2. roasting
3. stir-frying
4. barbequing
5. baking
6. smoking

Sample Test

Name _____

Dry Cooking Methods

Part One: Multiple Choice

Instructions: **Circle the letter of the correct answer.**

1. Baking is _____.

   a. another word for roasting
   b. quick compared to roasting
   c. done in a hotter oven than roasting
   d. All of the above

2. Stir-frying _____.

   a. requires small, uniformly cut pieces of food
   b. requires several inches of hot fat
   c. requires medium heat
   d. works for vegetables but not meats

3. Food cooked with the heat source above the food is _____.

   a. roasting
   b. braising
   c. broiling
   d. baking

4. All are suitable for sautéing *except* _____.

   a. lean fish (such as perch)
   b. zucchini
   c. chicken breast
   d. chuck roast

5. Food cooked on grates directly over a heat source is _____.

    a. grilled
    b. smoked
    c. stir-fried
    d. baked

6. Frying at a low a temperature results in _____.

    a. moist food
    b. greasy food
    c. tender food
    d. lightly browned food

Part Two: True/False

Instructions: **Write *T* for true or *F* for false.**

_____1. Microwaving works by heating the solid molecules of foods.
_____2. Fish with a high fat content (such as salmon) is a good choice for frying.
_____3. The purpose of searing is to brown the surface of the food with high heat.
_____4. A benefit of deep-frying is that food cooks very fast.
_____5. Generally, fruit is not baked.
_____6. Panfrying is a healthier alternative than deep-frying.
_____7. Tougher cuts of meat are good choices for broiling.

Part Three: Completion

Instructions: **Provide the word or words to complete the following statements.**

1. Most people use microwave ovens to _____ food.

2. If meat is on a metal rack or sitting on top of vegetables before it goes in the oven, the technique being used is _____.

3. Small pieces of meat and/or vegetables constantly in motion while cooking over high heat is called _____.

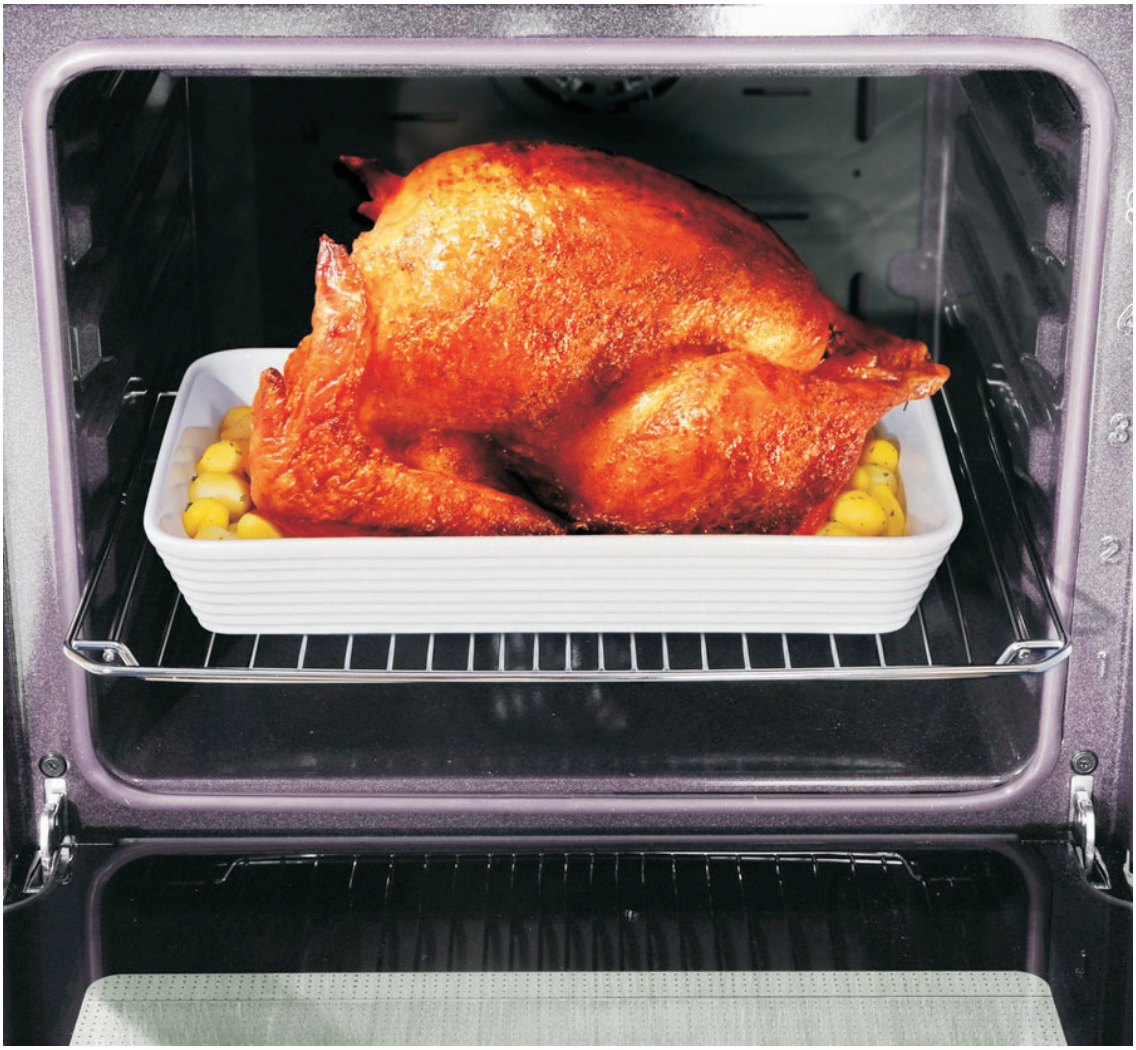
4. Meat prized for its own flavor is not a good candidate for _____ because the rub or sauce would overpower the natural flavor.

5. An oven cooking technique that requires a moderate temperature and food that is not too thick is called _____.

6. A dry cooking method that provides food a very specific and intense flavor and often a deep golden color is _____.

DRY COOKING METHODS: ROASTING, GRILLING, AND BROILING

Roasting



This roasted turkey was raised in the roast pan on a bed of vegetables instead of with a roast rack.

Grilling and Broiling

Grilled food cooks on open grates directly above the heat source. When broiling food, the heat source is reversed and is located above the food. Grill pans are a popular way to grill steaks indoors.

DRY COOKING METHODS: DEEP-FRYING AND STIR-FRYING

Deep-Frying

Deep-frying cooks food by submerging it in hot fat.

Stir-Frying

Stir-fry dishes require that all foods be cut into similar small sizes for even cooking.

DRY COOKING METHODS: BARBEQUE

Barbeque

Here are two types of barbeque spare ribs. One has been prepared over hot coals, and the other has been prepared in the oven (no char marks from a grill). It is BBQ because of the rub and/or the sauce.

FOOD SUITABLE FOR DRY COOKING METHODS: BAKING AND GRILLING

Baking

Fish, chicken, pasta (such as lasagna), pork chops, and other shallow or thin food can be successfully baked, along with endless pastry items. This baked whitefish with a spicy crust is an example of a food that responds well to dry heat baking.

Grilling

Beef, lamb, poultry, pork, veal, firm fish, seafood, and firm vegetables are suitable for grilling. Tender meat is essential for use as a shish kebob.

FOOD SUITABLE FOR DRY COOKING METHODS: SAUTÉING AND STIR-FRYING

Sautéing

Virtually any food may be sautéed, with the exception of tough meat and very thick food. This image is an asparagus, pepper, mushroom, and ricotta cheese frittata. Notice little fat is used in a sauté process.

Stir-Frying

Seafood, beef, chicken, pork, and most vegetables are suitable for stir-frying. Tender meats and uniform sizes are essential. The chef is preparing a broccoli chicken stir fry.

VM–F

FOOD SUITABLE FOR DRY COOKING METHODS: SMOKING AND MICROWAVING

Smoking

Food high in fat such as certain fish, pork, beef, sausage, and poultry are good choices for smoking. Which of the food items in this image would be good candidates for smoking?

Microwaving

Fish, chicken, popcorn, and vegetables are cooked in a microwave, but the primary uses are still thawing and reheating. Most meat does not cook satisfactorily in a microwave oven.

LS–A

Name _____

Dry Cooking Methods

Purpose

The purpose of this activity is to become familiar with dry cooking method terminology. based on clues in a crossword puzzle format.

Objective

Identify dry cooking method vocabulary terms.

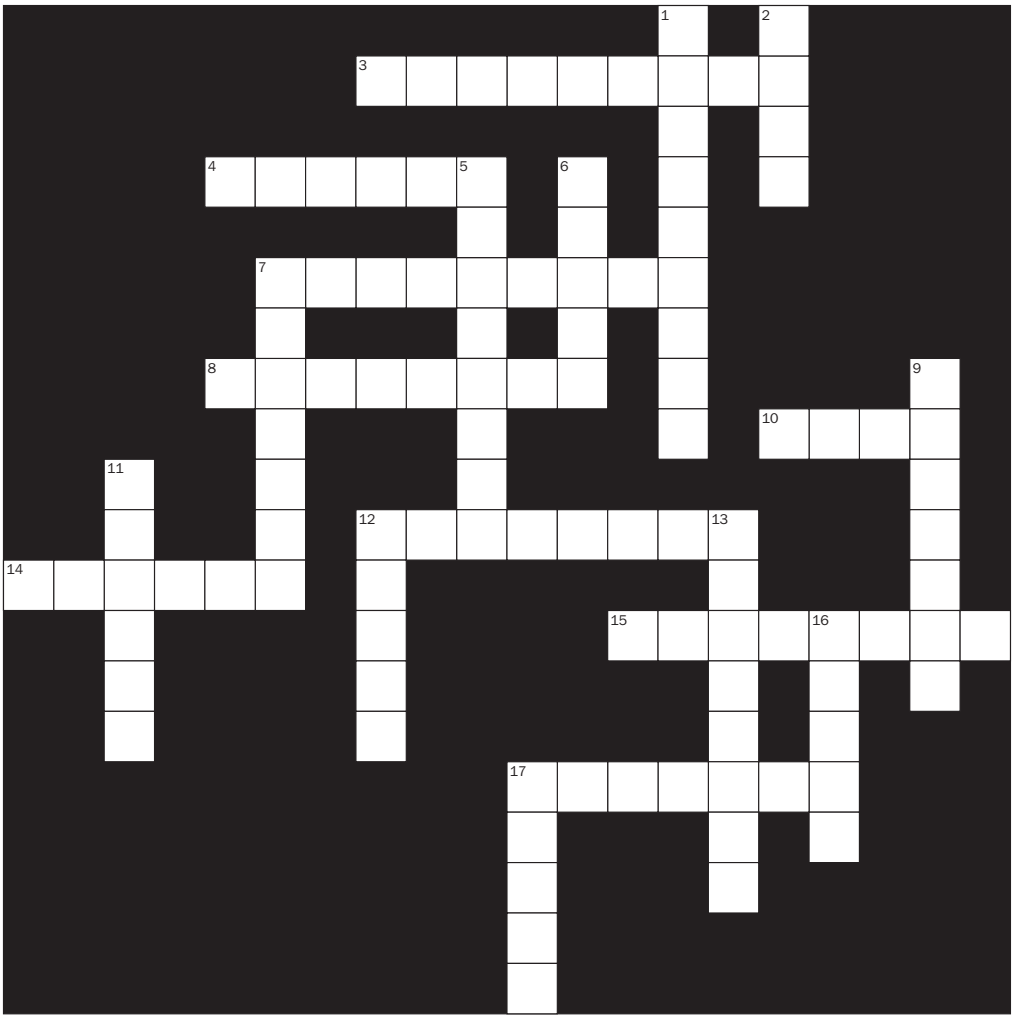
Materials

- class notes
- writing utensil

Procedure

Complete the crossword puzzle on the following page.

A game that focuses on terminology related to dry cooking methods.



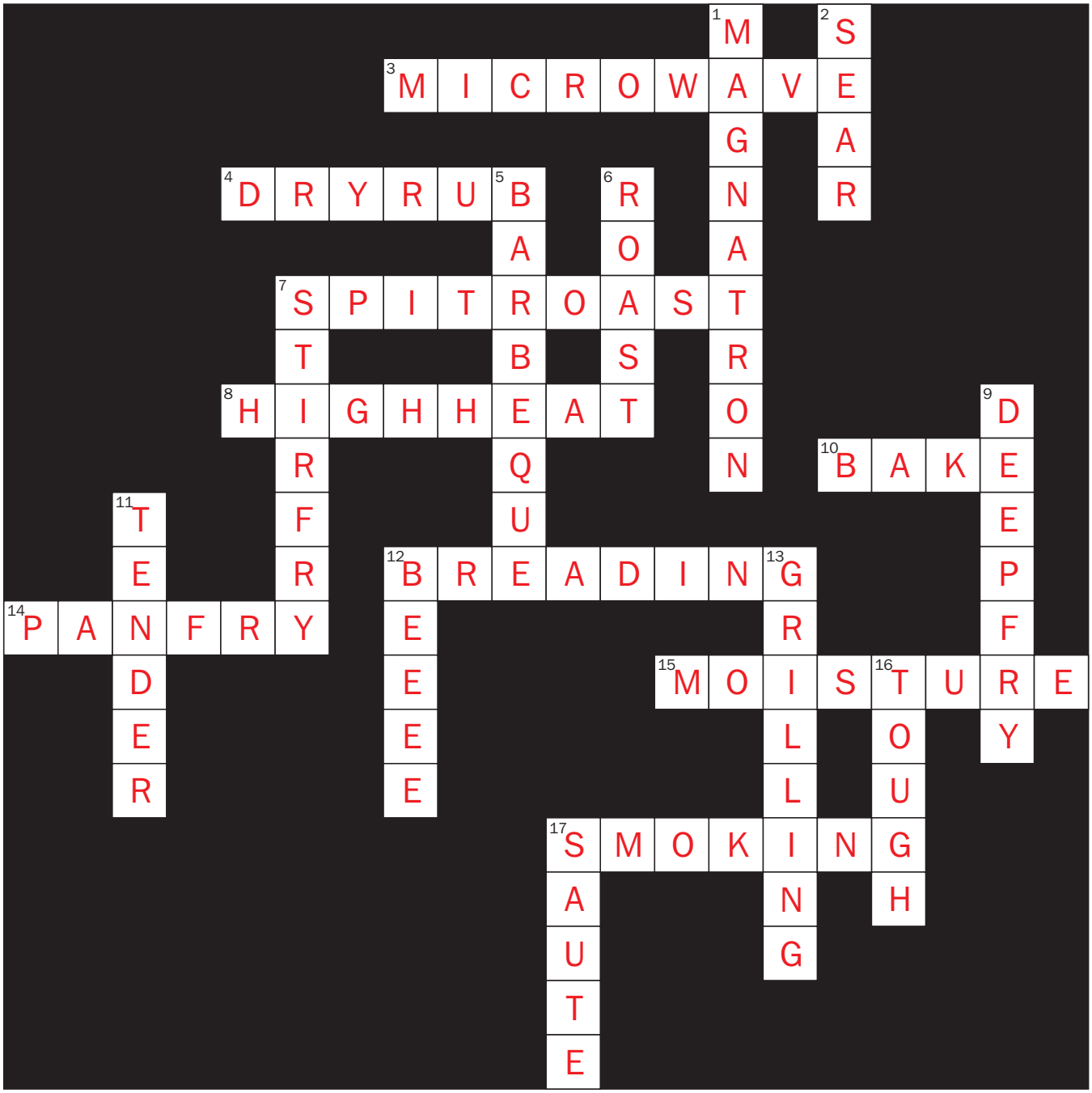
ACROSS

3 It's primarily used to reheat food.
4 It makes barbeque without the sauce.
7 Food cooks on a pole or rod, rotating over heat.
8 Stir frying and sauteing depend on this.
10 Cooking in an oven for fairly short periods of time
12 Deep fried foods commonly use this.
14 Food cooked in this way is done in hot shallow fat.
15 It's the only thing that actually reacts to microwaves.
17 It provides intense flavor, preserving and cooking food.

DOWN

1 It showers microwaves on food.
2 Browning occurs fast with high heat.
5 This food is usually coated in sauce.
6 Big pieces of meat cook on racks in this method.
7 All the food should be cut small for this.
9 Food swims in hot fat.
11 Dry cooking methods require this kind of meat above all else.
12 Heat will be over the food.
13 Fat will drip down through the grates when cooking this way.
16 The worst type of meat to use for dry cooking.
17 Most foods can be cooked this way when using the right pan.

Dry Cooking Methods



LS–B

Name _____

Dry Cooking Methods—Open Matching Plus: MISSION IMPOSSIBLE!

Purpose

The purpose of this activity is to promote multilevel problem-solving skills using dry cooking method terminology.

Objectives

1. Match dry cooking methods to specific foods.
2. Write an explanation to support each choice.
3. Participate in a class discussion of your food match with a dry cooking method.

Materials

- writing utensil
- paper (or word processor)
- computer with Internet access
- reference materials (food journals, textbooks, cookbooks, etc.)

Procedure

1. Work independently to complete this lab sheet.
2. Below are two lists. List 1 is dry cooking methods, and List 2 is various foods. Your mission (should you choose to accept it, *and you do!*) is to pair up a dry cooking method with a food. You may use each food only once, but there are more foods to choose from than there are cooking methods.

List 1	List 2
Roasting	Pineapple
Spit roasting	Turkey leg
Baking	Pork chop
Searing	Pear
Grilling	Salmon
Broiling	Shrimp
Sautéing	Beef brisket
Stir-frying	Cabbage
Panfrying	Whole chicken
Deep-frying	Macaroni & cheese
Barbequing	Trout
Smoking	Leg of lamb
Microwaving	Idaho potato
	Ground beef
	Whole ham
	Pea pods
	Grapes
	Carrots
	Lobster
	Swiss cheese
	Pork roast
	Bacon
	Rice
	Tilapia
	Egg
	Green pepper
	Spinach
	Tuna
	Beet
	Veal chop
	Celery
	Scallop
	Tomato
	Pizza

3. There is no “one right answer” for each cooking method, so you must complete the mission by explaining why you chose “each” food to be cooked in “that” dry cooking method. An answer sheet is shown below. There are incorrect choices and incorrect reasons for choosing a pairing, so be careful. You can use food journals, your textbook, and the Internet to describe any foods with which you may be unfamiliar.

ANSWER SHEET

a. Roasting Food Match _____

Reason:

b. Spit-roasting Food Match _____

Reason:

c. Baking Food Match _____

Reason:

d. Searing Food Match _____

Reason:

e. Grilling Food Match _____

Reason:

f. Broiling Food Match _____

Reason:

g. Sautéing Food Match _____

Reason:

h. Stir-frying Food Match _____

Reason:

i. Panfrying Food Match _____

Reason:

j. Deep-frying Food Match _____

Reason:

k. Barbequing Food Match _____

Reason:

l. Smoking Food Match _____

Reason:

m. Microwaving Food Match _____

Reason:

4. Participate in a class discussion of the Food Match made for each Dry Cooking Method.
5. Turn in your completed lab sheet to your instructor.

Dry Cooking Methods—Open Matching Plus: MISSION IMPOSSIBLE!

Note: Due to the nature of this activity and the wide variety of possible responses, specific answers are not provided. Grading would be primarily based on the REASON students provide for choosing each food response. Reasons should follow the guidelines as provided in the lesson, but be flexible if the rationale is sound. Please use your professional judgment.