

Basic Cooking Principles



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Basic Cooking Principles

To be successful in a commercial kitchen, you need to become familiar with the basic principles of cooking. Success depends on how the food you cook tastes and if it is cooked correctly. Whether you work in fine dining or a more casual kitchen, the elements of flavor are key to preparing a good meal. This unit will cover basic principles including seasonings, condiments, sauces, and methods of cooking and presentation.

Unit Topics

- Elements of flavor
- Basic staples of cooking
- Purposes of seasonings
- Types of salts
- Good taste enhancements.
- Forms of seasonings and herbs
- Guidelines for the use of seasonings
- Techniques for seasoning food
- Considerations for purchasing and storing seasonings
- Basic condiments
- Spreadable condiments
- Mexican food condiments
- Condiment sauces
- Purpose and use of marinades and rubs
- Cooking methods
- Procedures for methods of dry heat cooking
- Procedures for methods of moist heat cooking
- Procedures for methods of combination heat cooking
- Rules of presentation

Assignments

- Research a spice.
- Determine proper cooking methods for various types of meat.
- Determine seasonings for specific foods.
- Design a plate/platter presentation.
- Identify spices, herbs, and seasonings.

Basic Cooking Principles

Elements of Flavor

Key terms:

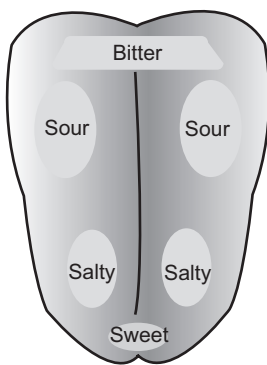
Flavor—Combination of the tastes, aromas and feelings caused by the occurrence of food in one's mouth

Savory—The rich or full flavor of foods; often describes a meaty taste

Texture—The way a dish feels in the mouth, such as crispy, crunchy, smooth, soft, or tender

Umami—A Japanese term meaning savory, richness, or fullness of food

- Aroma—Odor or fragrance of food that helps one taste the different flavors of food
- Taste—The special sense of perceiving different flavors in soluble substances that contact the taste buds on the tongue and trigger nerve impulses to special taste centers in the brain
 - » Sweet
 - » Salty
 - » Sour
 - » Bitter



- **Savory** or “**umami**”
 - Note:** Savory or umami is becoming accepted as the fifth basic taste.
- Touch—Sensation created in the mouth by the **texture** and temperature of food

Basic Staples of Cooking

- Refrigerator items—Food items that must remain cold, or they will immediately begin to perish
- Freezer foods—Foods that contain water, which freezes and causes the item to last longer before future use
- Produce—Raw fruits and vegetables
- Dry goods—Goods that need to remain in a dark, dry location, such as a pantry
- Canned/bottled items—Items purchased from a store that arrive in a can or bottle; treated with a preservative so they won't spoil
- Vinegar/oil—Used to add flavor to foods, preserve them, or as a fat base to cook them in; kept in dry storage away from flame and heat until ready for use

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- Dried herbs—Plants used to add a seasoned flavor to foods by adding an herbal flavor to the dish
- Spices—Crushed or ground up plant used in very small quantities to enhance food flavor
- Basic cooking staples include:

REFRIGERATOR	FREEZER	PRODUCE
Eggs	Ice	White potatoes
Butter or margarine	Vegetables	Sweet potatoes
Milk	Ground beef	Onions
Whipping cream	Whole chicken	Garlic
Sour cream	Boneless chicken breasts	Sweet peppers
Cream cheese	Boneless pork chops	Hot peppers
Mild cheese	Link and/or bulk sausage	Fresh mushrooms
Sharp cheese	Bacon	Dried mushrooms
Mozzarella	Breads and rolls	Lettuce
Parmesan cheese	Prebaked pizza shells	Cucumbers
Romano cheese	Fresh breadcrumbs	Tomatoes
Mayonnaise	Bread cubes	Carrots
Yellow mustard	Puff pastry	Celery
Dijon mustard	Phyllo dough	Apples
Worcestershire sauce	Flour tortillas	Oranges
Steak sauce	Corn tortillas	Lemons
Horseradish	Pierogies	Limes
Ketchup	Stuffed pasta	Parsley
Pickle relish	Hors d'oeuvres	
Hot pepper pickles	Beef stock	
Green olives	Chicken stock	
Ripe olives	Fish stock	
Assorted pickles	Non-dairy topping	
Salsa	Walnuts	
Jellies or jams	Pecans	
Apple butter	Almonds	
Refrigerator biscuits	Ice cream or frozen yogurt	
Bacon	Sherbet	
Fat back	Frozen fruits	

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DRY GOODS	CANNED / BOTTLED	VINEGAR / OIL
All-purpose flour	Whole tomatoes	Olive oil
Cake flour	Tomato paste	Canola oil
Cornmeal	Tomato puree	Peanut oil
Cornmeal muffin mix	Tomato sauce	Olive oil spray
Granulated sugar	Crushed tomatoes	Cooking oil spray
Confectioner's sugar	Chicken broth	Red wine vinegar
Brown sugar	Condensed cream of mushroom soup	Balsamic vinegar
Baking soda	Canned fruits	White distilled vinegar
Baking powder	Pie fillings	Cider vinegar
Yeast	Worcestershire sauce	
Cornstarch	Soy sauce	
Unsweetened cocoa	Dijon mustard	
Unsweetened chocolate	Tuna	
Semi-sweet chocolate	Anchovies	
German chocolate	Anchovy paste	
Biscuit mix	Green beans	
Minute tapioca	Asparagus	
Vegetable shortening	Chickpeas	
Oatmeal	Kidney beans	
Cereal	Creamed corn	
Crackers	Whole kernel corn	
Dried breadcrumbs	Evaporated milk	
Pasta (such as):	Peanut butter	
Penne or ziti	Canned chilies	
Spaghetti	Assorted pickles	
Angel hair	Olives	
Fettuccini	Capers	
Linguini	Chopped pimentos	
Ditalini	Hoisin sauce	
Lasagna	Sesame oil	
Orzo	Salsa	
Elbows	Light corn syrup	
Egg noodles	Dark corn syrup	
Long grain rice	Pure maple syrup	
Brown rice	Pancake syrup	
Wild rice	Honey	
Arborio rice	Pure vanilla	
Barley	Almond flavoring	
Kidney beans	Bouillon	
Great Northern beans	Hot sauce	
Lentils	Grated cheese	
Split peas		
Onion soup mix		
Dried corn		

DRIED HERBS	SPICES
Parsley	Peppercorns
Oregano	Coarse salt
Basil	Iodized salt
Rosemary	Cinnamon sticks
Thyme	Ground cinnamon
Rubbed sage	Ground nutmeg
Marjoram	Ground cloves
Cilantro	Whole cloves
Bay leaves	Ground turmeric
Chives	Ground allspice
Tarragon	Ground mace
Dill weed	Pickling spice
Dill seed	Mustard seed
Onion powder	Dry mustard
Minced onions	Cayenne pepper
Garlic powder	Celery seed
Minced garlic	Caraway seeds
	Fennel seeds
	Ground ginger
	Ground cumin

Purposes of Seasonings

- To enhance natural taste by making the natural taste of food more intense or noticeable

Example: If pasta is cooked in plain water without any salt, it won't have much flavor; if a little salt is added to the water, the pasta tastes more like pasta.

- To balance flavors by helping to overcome very strong tastes, especially sour, sweet, or bitter tastes

Note: This is commonly referred to as "balancing the tastes" in a dish.

Examples: Vegetables that are very bitter taste less bitter when you add some salt to them; sour foods, such as lemon juice, taste less sour with a bit of sugar; and sweet foods taste less sweet with a bit of salt.

- To make it easier to taste other ingredients or flavors in the dish once the strong taste is reduced a little
- To cut richness or oiliness of a dish by changing the way a very rich or fatty food tastes

Example: Lemon juice or vinegar improves the taste of mayonnaise by making it taste less rich or oily.

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Types of Salts

Note: Some foods are naturally high in **sodium** content and do not require extra salt to be added.

Key terms:

- **Citric**—Sour or tart flavor coming from citrus fruit
- **Iodized**—Substance treated with iodine
- **Kosher**—Food prepared so it is fit to consume under Jewish law
- **Monosodium glutamate**—A sodium of glutamic acid that is used to enhance food flavor
- **Pickling**—To preserve a cold food by soaking it in brine or vinegar solution
- **Sodium**—Elemental component of several minerals used to enhance flavor; table salt (sodium chloride) is most common
- **Unrefined**—Substance not processed to remove impurities

- **Citric salt**

Note: Also called sour salt

- » Extracted from citrus fruits, like lemons and limes
- » Imparts a tart flavor to dishes

- **Iodized salt**

- » Fortified with iodine lost during processing
- » Adds flavor to food
- » Heightens existing flavors
- » Helps process raw ingredient flavors together

- **Kosher salt**

- » Coarse salt evaporated from a brine
- » Contains no additives or extra iodine
- » Popular with cooks because the coarse texture makes it easy to pinch and sprinkle
- » Contains less sodium per comparable serving than iodized or table salt

- **Pickling salt**

- » A fine grained, additive-free salt
- » Used in the brine to pickle foods and make sauerkraut

- **Rock salt**

- » Consists of large chunks of **unrefined** salt
- » Has a grayish color
- » Used to prepare and serve foods

Examples: Combine rock salt with ice to freeze ice cream mixture; serve raw oysters on a bed of rock salt

- Seasoned salt
 - » An alternative to plain table or iodized salt
 - » Contains a blend of spices, vegetable extracts, and salt
 - » Many types of seasoned salt contain **monosodium glutamate**, or MSG
 - » Contains a lower sodium content
- Sea salt
 - » Made from evaporated sea water
 - » Includes trace minerals that give it a specialized flavor over other salts
 - » Is more expensive than other salt varieties
 - » Comes in different color tints according to the area from where it was harvested

Examples: Black, brown, pink salts from India
- Table salt
 - » Has had all other trace minerals removed
 - » Includes added chemicals to prevent clumping
 - » Preferred in baking because of its fine texture and easy measurability

Other food taste enhancements

Key terms:

- **Extract**—Pure or concentrated substance removed by dissolving the original substance in a liquid with a solvent, then evaporating the solvent
- **Flavoring**—A substance added to food to give it a special taste
- **Herb**—A plant or plant part valued for its medicinal, savory, or aromatic properties
- **Spices**—Substances made from the root, flower, berry, or fruit of vegetation; usually add pungent flavor

- Base
 - » Includes soluble concentrates of chicken, beef, vegetables, or other stock items
 - » Tomatoes, spices, or other ingredients are often added to the base
- Condiment
 - » Used by the customer to enhance the flavor of food
 - » Flavor pairs with certain foods

Examples: Worcestershire sauce and steak; ketchup and French fries

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- **Extract**—Natural derivative of a plant, tree, or shrub used to flavor foods
- **Flavoring**—Artificial or synthetic product used to replace a natural extract due to demand and limited supply
- Monosodium glutamate (MSG)
 - » The salt of glutamic acid
 - » Added to food, especially Chinese food
 - » Tricks the taste buds into thinking there is more protein in a food than there actually is
 - » Stimulates the pancreas to produce insulin, which causes the blood sugar to drop and make the consumer want more food
- Pepper
 - » Black
 - ◇ Seasoning contains the husk, showing up as black when ground
 - ◇ When added at the beginning of a recipe, the entire batch tastes peppery
 - ◇ If added at the end of a recipe, various ingredients will taste peppery
 - » Red
 - ◇ Made of hot red peppers
 - ◇ Comes in crushed, whole, or ground varieties
 - » White
 - ◇ Comes from the same plant as black pepper, but is dried and dehusked
 - ◇ Does not show up in foods like black pepper does
- Seasoning
 - » Includes various **herbs** and **spices** that can be added to foods
 - » Organic in nature, such as leaves, roots, grasses, and berries
 - » Often dried and further processed for sale
 - » Adding seasoning to a dish can blend the flavors
 - » Enhances certain flavor sensations on the tongue
 - » Two or more seasonings combined are called a “blend”
- Vinegar
 - » Is a sour liquid used for seasoning and preserving food
 - » Made from oxidized alcohol of wine or cider

Forms of Seasonings

- Whole
 - » Sold unbroken, as it came from the plant or source
Example: Whole cloves
 - » Can be fresh or dried
- Leaf
 - » A fresh or dried whole leaf
Example: Bay leaves
 - » Used in soups and stews for flavoring
- Ground
 - » Crushed until powder-like
Example: Ground cinnamon
 - » Can be dried and ground with a mortar and pestle if purchased whole
- Cracked
 - » Broken apart into chunks
Example: Black pepper
 - » Can be cracked in a grinder
Example: Pepper cracked in a crank-turned pepper mill
- Rubbed
 - » Dried and crumbled
Example: Rubbed sage
 - » Are usually very aromatic
- Minced
 - » Chopped into very small, fine pieces
Example: Minced onions
 - » Can be purchased raw and chopped, but is also sold minced in a jar
Example: Minced garlic
- Flaked
 - » Small pieces broken from a larger piece
Example: Flaked parsley
 - » Includes pieces that are usually smaller than with rubbed seasonings

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Guidelines for the Use of Seasonings

- Follow recipes that have been well tested.
- Add $\frac{1}{4}$ teaspoon per pound of meat.
- Add $\frac{1}{4}$ teaspoon per pint of liquid.
- When increasing recipes, increase by amounts of $\frac{1}{8}$ to $\frac{1}{4}$ teaspoon from the original amount, until the desired flavor is obtained.
- Use $\frac{1}{8}$ teaspoon of pepper or garlic powder per pound or pint.
- Use seasonings in moderation.

Techniques for Seasoning Food

- When seasoning a food, try to improve the food's unique flavor without changing it significantly.
- It is easy to add too much salt; place salt in a small bowl and add "pinches," tasting after each application.
- Place whole seasonings such as cloves or bay leaves in cheesecloth or muslin and tie closed so they may be removed when the desired flavor has been reached; add at the beginning of cooking.
- Seeds such as poppy seeds and sesame seeds may be toasted before using; add them near the end of cooking.
- Crumble or finely chop leaves such as parsley before use; add near the end of cooking.
- Allow food to stand after adding spices to allow the full flavor to develop.
- If it is not possible for food to stand, liquid and spices should be heated to allow flavor to develop, then cooled.
- To season salad dressing, add spices to vinegar and let stand before adding oil.
- Adding the seasonings early enough allows time for the seasonings to be absorbed.
- When cooking a dish such as soup, seasoning can be added during the cooking process.
- When cooking a roast or large piece of meat, you should add spices in the beginning.
- Sometimes seasonings are not added until the end to add a little extra "kick" of flavor.
- If the food is liquid, add salt at the end because the evaporating liquids could leave a salty flavor; if the cook adds salt at the beginning, the end product could be too salty.

Considerations for Purchasing and Storing Seasonings

Key term:

- **Pungent**—Substance that possesses a sharp odor and bitter flavor in the mouth
- Purchasing seasonings
 - » Quality should come first; check for a fresh, **pungent** aroma; check for a rich, fresh color.
 - » Buy in units that will allow for rapid turnover.
 - » Herbs lose quality faster than other spices.

- » Whole spices keep longer than ground spices.
- » Whole or leaf herbs store longer than crushed or flaked herbs.
- » Color, appearance, flavor and texture should be considered.
- » Food service workers need to know each spices' flavor, aroma, and effect on food in order to use each efficiently.
- Storing seasonings
 - » Store in a cool, dark place: heat and light destroy flavor.
 - » Store in a dry place, as moisture may cause caking.
 - » Keep containers tightly closed to prevent loss of oils, contamination, and infestation.
 - » Spices must be carefully stored to retain their effectiveness.
 - » Salt storing has some of its own rules:
 - ◇ Salt should be stored away from moisture and steam.
 - ◇ For cooking purposes, keep in a "salt pig" container so it's easily accessible on the counter for adding a pinch.
 - ◇ Add a few grains of rice to table salt dispensers with holes on top, so it will flow easily without clumping.

Basic Condiments

- Brown sugar
 - » White sugar that has been refined with molasses
 - » Comes in golden, light, and dark versions
 - Note:** The darker the color of brown sugar, the more molasses used during refinement.
 - » Used to prepare baked treats and entrees, and served with oatmeal and grits as a sweetener
- Cheese
 - » Bacteria-treated milk product
 - » Includes popular varieties, such as American, cheddar, colby, Monterrey jack, Swiss, and parmesan
 - » Shredded or melted for use as a condiment
 - » Used on all kinds of foods to add a cheesy flavor
- Coconut
 - » The fleshy part of the coconut tree fruit that has been dried and shredded
 - » Served as an ice cream topping, as a garnish for whipped cream on pies, as an ingredient cooked in entrees, and as an ingredient baked into cookies, cakes, and pies

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- Fruit
 - » The ripened seed-bearing product of a plant
 - » Cleaned, peeled, and diced to top foods
 - » Imparts a naturally sweet, fresh flavor
 - » Served on ice cream, cakes, pies, pastries, and entrees
 - » Most common fruits used as condiments include: strawberries, apples, oranges, grapes, kiwi, and melons
- Honey
 - » A sweet yellow liquid produced by bees
 - » Made from the nectar of flowers
 - » Can be mixed with butter or margarine to make “honey butter”
 - » Served on biscuits, cornbread, sopapillas, and rolls
- Nuts
 - » The seed removed from a hard shell
 - » Commonly used nuts include peanuts, walnuts, pecans, and almonds
 - » Served atop ice cream, as a garnish for whipped toppings, baked into cookies and pies, and cooked into entrees
- Powdered sugar

Note: Also called confectioners’ or icing sugar

 - » Granulated white sugar that has been crushed into a fine powder
 - » Used as the main ingredient in icing and frosting, and dusted onto baked goods (cookies, cakes, and pastries) to sweeten them
- Red pepper flakes
 - » Coarsely ground flakes of dried red chilies, including seeds
 - » Have a moderately hot flavor
 - » Served on pizza and salads
- Sour cream
 - » Cream fermented with lactic acid bacteria
 - » Served on baked potatoes and Mexican food, is a salad dressing base, makes onion dip, and ingredient in baked cakes, cookies, biscuits, and scones
- Sugar
 - » A sugar cane product

- » Used to impart a sweet flavor, such as in iced and hot teas
- Syrup
 - » Sugar dissolved in water until it is a thick semi-liquid and then flavored
 - » Comes in various flavors, such as maple, butter, and boysenberry
 - » Is often heated before being served with pancakes, waffles, and French toast
 - » Available in reduced-calorie versions
- Whipped cream
 - » A thick butterfat cream from whole milk that is air whipped until it's fluffy
 - » Used to top hot chocolate, ice cream, and pie

Spreadable Condiments

Note: Condiments may be served with pancakes, waffles, French toast, bread, cereal, eggs, potatoes, or the entrée.

Key terms:

- **Emulsion**—Two non-mixable liquids in suspension
Examples: Oil in water; fat in milk
- **Pectin**—Substance found in plants used as a gelling agent

- Apple butter
 - » Apples slow cooked with cider or water until the mix caramelizes
 - » Does not contain butter, but is a thick, spreadable apple product
 - » Spread onto toast, biscuits, and rolls
- Cream cheese
 - » Milk fat curds and whey that have been cut up and drained
 - » Soft, creamy, white, unripe cheese
 - » Spread onto bagels and as an ingredient in cheesecake
 - » Comes in flavored varieties, including: onion, chives, garlic, chocolate, honey nut, and coffee
- Jam
 - » Fruit thickened with sugar and **pectin**
 - » Contains peeled fruit chunks
 - » Served on biscuits, pancakes, or toast

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- » Comes in various flavors based upon the fruit from which it's made

Examples: Plum and peach

- Jelly

- » Fruit juice thickened with sugar and pectin
- » Has had the fruit filtered out, leaving a thick, spreadable concoction
- » Served on biscuits, pancakes, or toast
- » Comes in various flavors based upon the juice from which it's made

Examples: Apple, cherry, grape, apricot

- Marmalade

- » Made from citrus fruit peel
- » Similar to jam, but has a bitter flavor
- » Can be made from oranges, lemons, limes, and grapefruits
- » Often served on biscuits or to flavor chicken during cooking

- Mayonnaise

- » Thick **emulsion** of egg yolks, oil, lemon juice or vinegar, and seasonings
- » Used to dress hamburger buns and sandwich bread slices, as main ingredient in tuna and chicken salads, and to thicken salad dressings

- Mustard

- » Ground seeds of mustard plants mixed with water, vinegar, and flour
- » Mustard seeds come in various varieties and colors, including yellow, white, brown, and black
- » Has a spicy, sharp flavor and aroma
- » Popular mustards include plain yellow and spicy dijon
- » Served on sandwich bread, hamburger buns, and hot dogs and as an ingredient in salad dressings

- Peanut butter

- » Roasted and finely ground peanuts sweetened with sugar and salted
- » Available in smooth and crunchy styles
- » Served on bagels and sandwiches and in candy, cookies, and pastries
- » Sold flavored with honey, hazelnut, or chocolate

Mexican Food Condiments

- Guacamole
 - » Mashed avocados mixed with lime juice, salt, tomatoes, onion, chili peppers, garlic, cilantro, and other spices
 - » Served with tortilla chips and Mexican foods
- Pico de gallo
 - » Chopped fresh tomatoes, chili peppers, and onions combined with lime juice, salsa, and cilantro
 - » Served with tortilla chips, Mexican foods, and omelets

- Salsa

Note: In Spanish and Italian languages, “salsa” refers to any kind of sauce. However, in English language, “salsa” is a special kind of hot sauce (described below).

- » Cooked red tomatoes or green tomatillos combined with a combination of garlic, chili peppers, onion, and herbs (such as cilantro)
 - » Served with eggs, Mexican food, and tortilla chips
- Tabasco
 - » Sauce made from salted and cured Tabasco peppers, salt, and vinegar
 - » Used to flavor Bloody Mary drinks, beef, and Mexican entrees

Condiment Sauces

- Barbecue sauce
 - » Ingredients include tomatoes, vinegar, brown sugar, molasses, spices, chili powder, mustard powder
 - » Served with grilled and smoked foods
- Chili sauce
 - » Blend of hot and mild chilies, vinegar, sugar, and sometimes tomatoes
 - » Commonly used on Mexican and Cajun foods
- Gravy
 - » Meat or vegetable drippings thickened with flour
 - » Often served on meat, biscuits, and stuffing
 - » Types of gravies
 - ◇ White gravy (also called country gravy)—Meat drippings thickened with milk and white flour
 - ◇ Giblet gravy—Contains chicken or turkey giblets added to the gravy, which is then served with the same type meat

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- ◊ Redeye gravy—Made with ham drippings

- ◊ Tomato gravy—Made with canned tomatoes, flour, and a small amount of fat

- Hoisin sauce

Note: Also called “Chinese barbecue sauce”

- » Thick, dark colored sauce made of soy, garlic, vinegar, chilies, and sweetener

- » Used in Asian stir-fry dishes and in marinades

- Horseradish sauce

- » Spicy sauce made from horseradish root, vinegar, salt, cream, sugar, and oil

- » Condiment often paired with seafood and cold cuts

- Ketchup

Note: Also spelled “catsup”

- » Thick sauce made from tomatoes, sugar, and vinegar; seasoned with cloves, allspice, cinnamon, onions, and salt

- » Commonly served with French fries and on hot dogs and hamburgers

- Marinara sauce

- » Sauce made of tomatoes, onions, garlic, oregano, basil, and chili peppers

- » Thick, red sauce poured onto Italian dishes and used as a dip for finger foods

- Salad dressings

- » Often used as a dipping sauce for finger foods

Examples: Fried cheese sticks, carrot sticks, buffalo wings

- » Popular dressing sauces include creamy ranch and blue cheese dressings

- Shrimp cocktail sauce

- » Mix of tomato sauce or ketchup, sugar, and horseradish sauce

- » Used to dip boiled seafood, such as shrimp

- Soy sauce

- » Dark brown sauce made from fermented soy beans and wheat, vinegar, sugar, salt, and spices

- » Very salty sauce poured onto Asian foods and steaks

- Steak sauce
 - » Orangish to brown colored sauce poured onto steaks and other beef products
 - » Made from tomatoes, spices, vinegar, raisins, and anchovies
 - » Has a spicy, peppery flavor that is either tart or sweet
- Tartar sauce
 - » Mix of mayonnaise and chopped pickles, onions, and parsley; vinegar sometimes added
 - » Eaten with seafood, especially fried and breaded seafood
- Worcestershire sauce
 - » Contains vinegar, molasses, corn syrup, chili peppers, soy sauce, anchovies, onions, tamarinds, cloves, shallots, and garlic
 - » Used to flavor beef, Caesar salads, and Bloody Mary cocktails

Purpose And Use Of Marinades And Rubs

Key term:

- **Tenderize**—Breaks down the tough connective tissues of meat

- Marinades
 - » Marinades are liquid mixtures used to soak and **tenderize** meat before grilling.
 - » Liquid marinades made of wine or vinegar contain acid that tenderizes the surface of the meat, but the result is a drier meat.
 - » The softer the meat, the less marinating time required.
 - » The length of marinating time varies by cook and recipe.
- Rubs
 - » Rubs are dry spice mixtures massaged onto meat before smoking.
 - » They add intense flavor to the meat, without excessive moisture.
 - » Rubs should consist of the freshest possible ingredients.
 - » Massage rubs into the meat and let stand for 1/2 hour before smoking.
 - » Rubs do not store well; store in a dark, dry location.

Basic Cooking Principles

Types Of Cooking Methods

Note: When cooking, keep in mind the rate of heat transfer (dry heat, moist heat, or combination heat), or how efficiently heat passes from the cookware to the food inside it.

- Dry heat cooking methods—Use air or fat to transfer heat through conduction or convection; used on thin, tender cuts of meat

Examples: Chops, steaks, or cutlets, ground meats, most vegetables, most seafood

- » Broil—To cook by exposure to direct heat on a grill or stove, or live coals
- » Deep fat fry—To cook in fat on a surface burner
- » Grill—To cook by direct heat
- » Pan broil—To cook on hot frying pan or grill, pouring off fat as it accumulates
- » Pan fry—To cook in a small amount of fat
- » Roast and bake—To cook by dry heat, usually in an oven
- » Sauté—To brown quickly in a small amount of fat, turning often

- Moist heat cooking methods—Involve cooking food in a liquid bath; used on seafood, vegetables, and tender cuts of poultry

Examples: Chicken breasts, some fruits and starches, and pasta

- » Boil—To cook in water or other liquid that has been heated until bubbles rise continuously and break on the surface
- » Fricassee—To cook by stewing; usually applied to fowl, rabbit, or veal cut into pieces
- » Parboil—To boil until partially cooked
- » Poach—To gently cook in a hot liquid using care to retain shape
- » Scald—To heat to a temperature just below the boiling point
- » Simmer—To cook in a liquid at a temperature just below boiling (about 185°F); bubbles form slowly and break below the surface
- » Steam—To cook in steam with or without pressure

- Combination heat cooking methods—Utilize both dry and moist heat cooking to deliver a cooked product; used on tough, less expensive cuts of meat

Examples: Beef round, pork shoulder, some vegetables, firm-fleshed seafood

- » Braise—To cook slowly in a covered dish with a small amount of liquid or in steam

Note: Meat may or may not be browned in a small amount of fat before braising.

- » Stew—To simmer in small amount of thick liquid

Procedures For Methods Of Dry Heat Cooking

- Bake
 - » Place prepared food in a glass or metal pan.
 - » Place pan into the oven compartment.
 - » Cook food by conduction or convection of dry heat until it has reached the proper internal temperature.
- Broil
 - » Prepare the food and place in a broiling pan.
 - » Place in the oven or broiler.
 - » Cook the food on one side until half done.
 - » Turn only once to finish cooking.
- Deep fat fry
 - » Dip food in breading.
 - » Place food in a metal container of hot, melted fat.
 - » Remove with a wire mesh basket and allow to cool.
- Grill
 - » Preheat the grill prior to cooking.
 - » Rub the grill surface with a small amount of fat.
 - » Allow to cook on medium heat.
 - » Flip the food when half done.
 - » Remove the fat as it accumulates.
- Pan broil
 - » Place food in a skillet.
 - » Put the skillet on a burner and turn the heat up to high.
 - » Turn the food as often as necessary.
 - » Pour off fat as it accumulates.
- Pan fry
 - » Pour a small amount of fat into a pan.
 - » Place the pan on the stove's burner and heat it up.

Basic Cooking Principles

- » Put the food in the pan and allow to fry.
- » Flip the food to allow it to cook evenly.
- Roast
 - » Place food in a pan large enough to accommodate it.
 - » Cook uncovered unless the recipe specifies otherwise.
 - » Maintain a low cooking temperature.
 - » Cook fat side up.

Note: This self-basting helps to prevent drying.

- Sauté
 - » Place a small amount of butter in a frying pan.
 - » Let the butter melt on the stove.
- Place the food in the pan with the melted butter.

Note: Do not cover while cooking.

- » Allow the food to cook in the butter at medium heat until it is soft.

Procedures For Methods Of Moist Heat Cooking

- Boil

Examples: Water must be boiled before pasta is added; chicken broth is brought to a boil before chicken is added (or readded).

- » Choose a pot with a lid that is large enough to hold the amount of liquid you want to boil.
- » Fill the pot with the desired amount of cold water or other liquid, either by measuring or directly from the tap.

Note: Remember that adding food to the liquid will cause the level to rise, so leave extra room in the pot if adding food.

- » Place the pot on the stove burner and cover it with the lid.
- » Turn the burner on high heat.
- » Allow the liquid to sit on the heat until bubbles begin rising to the surface.

Note: Do not allow the pot to boil dry, or the heat could ruin the pan.

- Fricassee

Example: Rabbit meat is often fricasseed in white gravy.

- » Heat butter on a skillet.

- » Fry meat item in the butter.
- » Remove the meat before it becomes browned.
- » Place the fried meat in a pot of white gravy.
Note: Gravy usually consists of egg yolks, cream, vegetables, and other flavorings.
- » Allow the meat and gravy to cook together in the pot the specified amount of time.

- Parboil

Example: Cauliflower is parboiled before being placed in stir-fry, as it can take longer to cook than other ingredients.

- » Add a small amount of water to a pan.
- » Bring water to a boil.
- » Place food (usually carrots or potatoes) in the boiling water.
- » Remove after about 10 minutes.
- » Food should be partially cooked when removed.

Note: Parboiled foods are partially cooked before being placed in another food dish, where they will finish the cooking process.

- Poach

Example: Salmon poached in white wine sauce

- » Heat a liquid to just below the boiling point, where the liquid is quivering but there are no visible bubbles rising to the top.

Note: Water freezes at 32°F and boils at 212°F.

- » Add the food to the quivering liquid.
- » Allow the food to cook in the boiling liquid the necessary amount of time.

- Scald

Example: Milk is scalded before being used in breadmaking to kill proteins that interfere with yeast fermentation.

- » Heat a liquid until it is just below the boiling point in a saucepan. The liquid is hot enough when tiny bubbles begin forming around the very edge of the pan.

- Simmer

Example: Watery tomato sauce can be simmered to thicken it.

- » Bring water to a boil.
- » Add food.
- » Cover pan.

Basic Cooking Principles

- » Cook slowly, maintaining temperature just below the boiling point.

Note: Sauce simmering is also used to reduce or decrease the volume of a liquid.

- Steam

- » When steaming meat, the meat must first be browned on all sides evenly, being careful not to sear meat.
- » Boil a pot of water.
- » Place browned meat or other food being steamed in a steamer basket.
- » Hang the steamer basket over the boiling water.
- » Place a lid on the pot, covering the boiling water and steamer basket.

Note: The steam from the boiling water will cook the food.

- » Use care not to overcook the food.

Procedures For Methods Of Combination Heat Cooking

- Braise

- » Cook or brown the food item on the stovetop.
- » Place the food item and accompanying liquids in a pan.
- » Add any extra ingredients.
- » Cook food in the oven with accompanying liquid at a low temperature (300°F).

- Stew

- » Place the food item in a pot.
- » Fill the pot with a thick liquid until the food item is completely covered.
- » Add any vegetables or extra ingredients specified in the recipe.
- » Cover the pot with a lid.
- » Keep food completely covered with liquid during cooking.
- » Follow the same process used for simmering but with less water.

Note: The liquid in a stew should be thick.

Rules Of Presentation

Key term:

- **Palate**—A sense of taste and flavor in the mouth

- Place food on serving dishes and plates that complement the food's appearance.
- Garnish with vegetables, fruits, sauces, or other items that complement the food's flavor.

- Serve with complementary foods.
- Use creativity to add a fresh twist on the food presentation, such as unique layout on the plate.
- Use appetizing, natural colors on the plate to appeal to the **palate**.
- By presenting the food in a formal manner, the culinary skill of the cook or chef shines through.
- The main course should be the primary focal point on the plate.
- Only use edible foods to decorate a plate.
- Complex dishes should have simple garnishment.
- Simple dishes require complex garnishment.



Basic Cooking Principles

Common Herbs and Spices

Herb or Spice	Origin	Form	Suggested Uses
Allspice Note: Allspice has a flavor similar to a combination of cinnamon, nutmeg and clove.	West Indies	Whole or ground dried berry	Fruit dishes, cakes, pies, pickles, liqueurs, Jamaican jerk seasoning, meat dishes, sauces
Anise	Egypt and the Mediterranean	Seeds	Candies, cookies, pastry, cheese, liqueurs, seafood
Basil	India and Persia	Fresh and dried leaves	Soups, salads, meats, eggs, sauces, casseroles, tomato dishes, pasta dishes
Bay leaves	Mediterranean	Leaves	Meats, soups, sauces, stews, vegetables
Capers	Southern United States, the Mediterranean, Canada, Great Britain	Flower buds pickled in salt and vinegar	Meat sauces
Caraway	Europe, Asia	Seeds	Pastry, cheese, cakes, breads, soups, sauerkraut
Cardamom	India	Whole or ground seed pods	Fruit, sauces, curries, cordials, pastries Note: Cardamom is especially good when combined with honey.
Cayenne	West Indies, Central and South America	Ground pods	Vegetables, salad dressings, spicy foods such as tamales and chili
Chili powder Note: Chili powder is a mix of chili peppers, cumin, garlic, and Mexican oregano.	United States	Ground	Mexican dishes, chili

Basic Cooking Principles

Herb or Spice	Origin	Form	Suggested Uses
Chives	Cultivated in U.S., wild in Europe and Asia	Fresh and dried leaves	Salads, soups, omelets, cheese, fish
Cinnamon	China	Ground bark or sticks	Pastries, puddings, cookies, candies, fruit, hot drinks
Cloves	Indonesia	Whole or ground flower buds	Cookies, candies, desserts, pies, hams, beef roast, stews, barbecue ribs
Coriander	Mediterranean countries	Seeds or ground	Curries, sauces, liqueurs, candies, meat dishes
Cumin	Mediterranean, Egypt	Whole or ground	Curry, Mexican food, marinades, stews, chili
Curry Note: Curry powder is a blend of turmeric, garlic, pepper, ginger, cumin, and other spices.	India	Ground	Lamb, veal, chicken, shrimp, vegetables
Dill	Mediterranean countries, Southern Russia	Fresh or dried seeds and tiny leaves	Fish, vegetables, sauces, salads, pickles, garnish
Fennel	Southern Europe, Mediterranean countries	Fresh or dried leaves and seeds	Italian dishes, seafood
Garlic	Central Asia	Cloves, minced or ground	Sauces, salad dressings, marinades, meats
Ginger	China, India	Ground or crystallized	Cookies, pastries, savory dishes
Mace	Molucca Islands	Ground or whole from the red covering of the nutmeg	Soups, sauces, pastries, pickles
Marjoram	Mediterranean countries	Fresh or dried leaves, stems and flowers	Stews, soups, stuffings, ragouts, sausage

Basic Cooking Principles

Herb or Spice	Origin	Form	Suggested Uses
Mustard	Mediterranean countries	Ground or whole seeds	Salad dressings, meat, fish, pickles
Nutmeg	Middle East	Whole and ground kernel	Soups, meat dishes, pastries
Oregano	Mediterranean countries	Fresh or dried leaves, stems, and flowers	Italian dishes, meats, vegetable soups, sauces, salad dressings
Paprika	Hungary, Spain	Ground pods	Meats, vegetables, salads, sauces, soups, garnishes
Parsley	Italy, cultivated in U.S.	Fresh or dried leaves	Vegetables, salads, sandwiches, soups, meat sauces, garnishes
Pepper (black) Note: White pepper is made from ripe berries of the same plant.	Italy	Whole or ground dried berries (peppercorns)	Most meat or vegetable dishes
Rosemary	Egypt	Fresh or dried leaves	Pork, fish, lamb, casseroles, seafood
Sage	Mediterranean countries	Fresh dried leaves and stems	Sausages, cheese, stuffings, poultry, sauces, breads
Thyme	Mediterranean countries	Fresh or dried leaves	Stuffings, sauces, poultry, tomatoes, soups
Turmeric	Indonesia, Southern Asia	Ground dried roots	Adds color to mustard, ingredient of curry powder, pickles, vegetables

Assignment

Research a Spice

Name _____ Overall Rating _____

Date _____

Directions

Choose one spice that you know very little about. Using the Internet, information on the previous pages, and cookbooks, find information and recipes that include the spice you chose. Make a list of recipe names and the ways in which the spice is used in the various recipes. Be prepared to present your research to the class.

Name of spice _____

Origin of spice _____

List different forms of the spice available and recommended use for each form:

Form Available	Recommended Use

List recipes containing this spice and the way the spice is used in each recipe:

Recipe Name	Way Spice is Used

Basic Cooking Principles

Evaluation Criteria	Rating
• Spice researched thoroughly	_____
• Information listed is accurate	_____

Evaluator's Comments _____



Assignment

Determine Proper Cooking Methods for Various Types of Meat

Name _____ Overall Rating _____

Date _____

Directions

Provide the optimum cooking method for each of the following types of meat:

1. Beef steak _____
2. Beef kidneys _____
3. Beef tongue _____
4. Chicken breast _____
5. Fish fillet _____
6. Whole turkey _____

Evaluation Criterion	Rating
• Proper cooking method provided	_____

Evaluator's Comments _____

Basic Cooking Principles



Assignment

Determine Seasonings for Specific Foods

Name _____ Overall Rating _____

Date _____

Directions

Using the information presented in the this unit and the Internet, choose appropriate seasonings for the listed products.

Food	Seasoning
Lamb	
Cakes	
Candies	
Casseroles	
Cheese dishes	
Cookies	
Curries	
Fish	
Fruit Dishes	
Garnishes	
Liqueurs	
Pastries	
Pickles	
Pies	
Pork	
Poultry	
Salads	
Sauces	
Sausages	
Mexican dishes	
Stuffing	
Vegetables	

Evaluation Criterion	Rating
• Proper seasonings selected	_____

Evaluator's Comments _____

Basic Cooking Principles



Assignment

Design a Plate/Platter Presentation

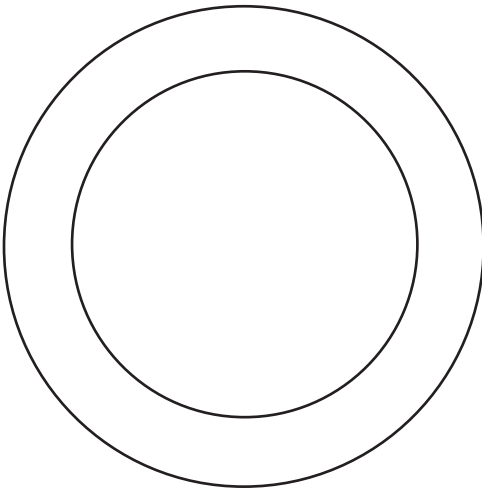
Name _____ Overall Rating _____

Date _____

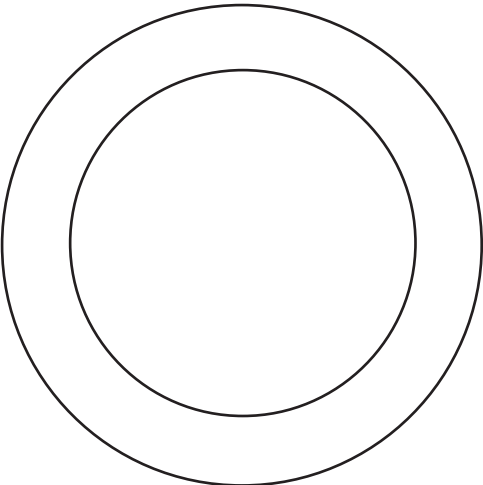
Directions

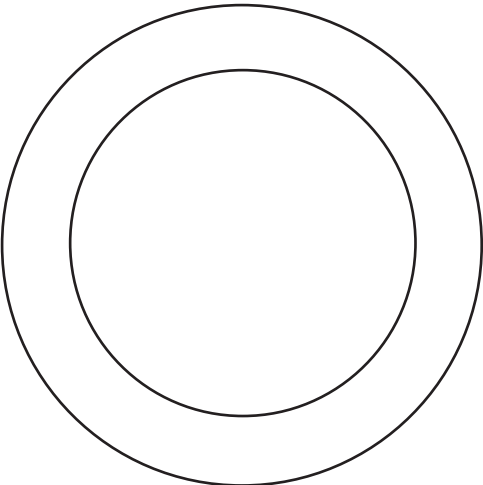
Design a plate or platter presentation that would be appropriate for the dining scenarios described below. Include a diagram of the plate presentation and a detailed description for each in the spaces provided below and on the next page.

Meal	Context
Roast beef, Yorkshire pudding, asparagus	Fine dining
Spaghetti with meat sauce, Caesar salad, garlic bread	Family-style restaurant
Club sandwich, French fries, pickle spear	Casual dining



Basic Cooking Principles





Evaluation Criteria	Rating
• Attractive, well designed plates/platters	_____
• Adequate space provided (no crowding)	_____
• Pleasing use of color	_____
• Appropriate garnishes chosen	_____

Evaluator's Comments

Assignment

Identify Spices, Herbs, and Seasonings

Name _____ Overall Rating _____

Date _____

Directions

When you are ready to perform this task, ask your instructor for samples of ten herbs, spices, and/or seasonings for your evaluation. Ask your instructor to evaluate your performance using the criteria above.

Tools, Equipment, and Materials

- 10 small samples of herbs, spices, or seasonings (provided by instructor)

Procedure

1. Examine a sample for the following:

- Appearance
- Aroma
- Taste

Note: Be careful when tasting pure spices, as they are concentrated and may be overwhelming to the palate. Taste the smallest possible amount required to make an evaluation.

2. Complete the information requested in the chart below.

Seasoning	Form Whole Leaves Ground Cracked	Color Rich Fresh Bright Dull	Aroma Strong Fresh Weak Pungent	Taste Sweet Sour Bitter Salty	Food Associated With
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

3. Repeat steps 1 and 2 until all samples have been evaluated.
4. Return tools and equipment to proper storage.
5. Clean the work area.

Basic Cooking Principles

Evaluation Criteria	Rating
• Product evaluated according to given criteria	_____
• Participation in class discussion	_____

Evaluator's Comments _____

