

Activity 1

Cooking Methods

How Foods Heat

Purpose: Review the basic differences among methods of heat transfer and the effect of heat on food.

Part I. Directions: Complete the missing information in the spaces below.

Method of Heat Transfer	_____	_____	Radiation
	↓	↓	↓
Description	As they are heated, molecules pass the heat on to neighboring molecules.	As air or liquid is heated, the hotter portions rise above the colder ones, creating a circular air flow.	_____ _____ _____
	↓	↓	↓
Example	_____	_____	Broiler uses this method of heat transfer.

Part II. Directions: Complete the missing information below.

How Heat Affects Food

Heat can change a food's...

1. flavor.
2. _____
3. _____
4. texture.

How Cooking Affects Nutrients

- _____ 1. Some nutrients, such as __?__, can be destroyed by heat.
- _____ 2. Although little protein is lost during cooking, animal protein is __?__ to high temperatures, resulting in rubbery or chewy food.

Activity 2

Cooking Methods

Conventional Cooking Methods

Purpose: To review the conventional cooking methods.

Directions: Complete the table below and the tables on the next page. Write the name of the described cooking method in the blank boxes to the left of each description.

Moist-Heat Methods

Method	Description	Advantage(s)	Disadvantage(s)	Food Uses
1.	Large bubbles rise to the surface and break.	<ul style="list-style-type: none"> • Needed for certain foods, such as rice or dry beans. • Useful when you want liquid to evaporate. 	<ul style="list-style-type: none"> • Causes greatest loss of nutrients. • Can over-cook foods. • Toughens protein. 	<ul style="list-style-type: none"> • Corn-on-the-cob • Pasta • Cooking down soups and sauces
2.	Small bubbles rise gently.	<ul style="list-style-type: none"> • Good for fragile foods. 	<ul style="list-style-type: none"> • Takes longer than other moist-heat methods. 	<ul style="list-style-type: none"> • Fruits • Vegetables • Less tender cuts of meat and poultry
3.	Food has no contact with boiling water.	<ul style="list-style-type: none"> • Retains food's nutrients, color, and shape. 	<ul style="list-style-type: none"> • Takes longer than the above two moist-heat methods. 	<ul style="list-style-type: none"> • Rice • Vegetables • Fish
4.	Cooks at high temperature and pressure.	<ul style="list-style-type: none"> • Tenderizes. • Fastest moist-heat cooking method. • Retains food's nutrients, color, and shape. 	<ul style="list-style-type: none"> • Can be hazardous because of pressurized steam. 	<ul style="list-style-type: none"> • Less tender cuts of meat and poultry • Dry beans • Soups • Vegetables • One-dish meals

Chapter 25 Activity 2 (continued)

Dry-Heat Methods

Method	Description	Advantage(s)	Disadvantage(s)	Food Uses
5.	Done in conventional oven.	<ul style="list-style-type: none"> • Makes a brown crust outside. • Keeps food tender and moist inside. • Fat drips away. 	<ul style="list-style-type: none"> • Slower than some other methods. 	<ul style="list-style-type: none"> • Meats, poultry, fish • Casseroles • Vegetables • Cakes, cookies, breads
6.	Done under direct heat.	<ul style="list-style-type: none"> • Cooks food quickly. • Browns food well. • Fat drips away. 	<ul style="list-style-type: none"> • Requires tender foods. 	<ul style="list-style-type: none"> • Fish • Fruits • Tender meats • Poultry

Frying Methods

Method	Description	Advantage(s)	Disadvantage(s)	Food Uses
7.	Done in a skillet.	<ul style="list-style-type: none"> • Cooks food quickly. • Browns food well. • Can remove fat. 	<ul style="list-style-type: none"> • Requires a tender cut of meat. 	<ul style="list-style-type: none"> • Hamburgers • Tender cuts of steak • Some pork
8.	Small pieces of food cooked in small amount of fat.	<ul style="list-style-type: none"> • Cooks food quickly giving it a “jump” start. 	<ul style="list-style-type: none"> • Adds fat. 	<ul style="list-style-type: none"> • Vegetables • Meats • Fish
9.	Larger pieces of food cooked in small amount of fat.	<ul style="list-style-type: none"> • Browns and crisps food. 	<ul style="list-style-type: none"> • Adds fat. 	<ul style="list-style-type: none"> • Meats • Poultry • Fish • Eggs
10.	Food is submerged in hot liquid fat.	<ul style="list-style-type: none"> • Cooks food quickly. • Browns and crisps food. 	<ul style="list-style-type: none"> • Adds the most fat. • Danger of burns and fire. 	<ul style="list-style-type: none"> • Vegetables • Fish • Doughnuts

Combination Methods

Method	Description	Advantage(s)	Disadvantage(s)	Food Uses
11.	Food is browned in fat and simmered in liquid.	<ul style="list-style-type: none"> • Tenderizes. • Adds flavor. 	<ul style="list-style-type: none"> • Adds some fat. 	<ul style="list-style-type: none"> • Large, less tender cuts of meat and poultry • Vegetables
12.	Food is fried quickly; seasoned liquid added at end of cooking.	<ul style="list-style-type: none"> • Cooks food quickly. 	<ul style="list-style-type: none"> • Adds some fat. 	<ul style="list-style-type: none"> • Vegetables and other foods

Activity 3**Cooking Methods****Food Preparation Match-Up**

Purpose: To identify important cooking method vocabulary.

Directions: For each definition in the left column, find the matching cooking term in the right column. Write the letter of the correct response in the space provided to the left of each number.

Definitions

- _____ 1. Transferring heat by direct contact.
- _____ 2. Movement of molecules through air or liquid.
- _____ 3. A form of cooking energy that is not heat energy.
- _____ 4. Cooking food in hot liquid, steam, or a combination of the two.
- _____ 5. The temperature at which fat begins to break down.
- _____ 6. A special bowl-shaped pan.
- _____ 7. Cooking food uncovered without added liquid or fat.
- _____ 8. Cooking foods from energy in the form of electric waves.
- _____ 9. The amount of energy the oven uses to generate microwaves.
- _____ 10. Electrical sparks that can damage the oven or start a fire.
- _____ 11. The actual time food cooks with microwave energy.
- _____ 12. When cooking is completed by the built-up heat in a food as its molecules continue to vibrate.

Terms

- A. Microwave time
- B. Dry-heat cooking
- C. Microwaving
- D. Cooking power
- E. Moist-heat cooking
- F. Convection
- G. Radiant energy
- H. Conduction
- I. Smoking point
- J. Arcing
- K. Standing time
- L. Wok