Healthy Eating Guidelines

Unit: Culinary Science

Problem Area: Nutrition

Lesson: Healthy Eating Guidelines

Student Learning Objectives.

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

1. **Identify healthy eating guidelines.**
2. **Describe food allergies and special diet restrictions.**

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.

"2015-2020 Dietary Guidelines for Americans," *U.S. Department of Health and Human Services and U.S. Department of Agriculture*. Accessed July 20, 2019. https://health.gov/dietaryguidelines/2015/guidelines/.

"Controlling Portion Sizes," *American Cancer Society*. Accessed July 20, 2019. https://www.cancer.org/healthy/eat-healthy-get-active/take-control-your-weight/controlling-portion-sizes.html.

The Culinary Institute of America. *The Professional Chef*, 9th ed. John Wiley & Sons Inc., 2011.

"Start Simple with MyPlate," *USDA Choose My Plate*. Accessed July 20, 2019. https://www.choosemyplate.gov/.

"How to Avoid Portion Size Pitfalls to Help Manage Your Weight," *Centers for Disease Control and Prevention (CDC)*. Accessed July 20, 2019. https://www.cdc.gov/healthyweight/healthy_eating/portion_size.html.

"Polyunsaturated Fats," *American Heart Association*. Accessed July 20, 2019. https://atgprod.heart.org/HEARTORG/HealthyLiving/FatsAndOils/Fats101/Saturated-Fats_UCM_301461_Article.jsp.

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):

- allergen
- anaphylaxis
- blood pressure
- celiac disease
- cholesterol
- diabetes
- diet
- fats
- food allergy
- gluten
- hypertension
- insulin
- lactose intolerance
- obesity
- phytochemical
- phytonutrient
- refined grain
- saturated fats
- trans fats
- unsaturated fats
- vegan
- vegetarian
- whole grain

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.

> *Ask your students: "What do you think makes up a healthy diet? Is there a type of food that people should avoid? Can you think of any medical conditions that might affect how somebody eats?" Lead a discussion about "healthy" eating.*

CONTENT SUMMARY AND TEACHING STRATEGIES

Objective 1: Identify healthy eating guidelines.

Anticipated Problem: What is a diet? What foods are part of healthy eating guidelines? How much of these foods should a person eat?

I. Healthy Eating Guidelines

A ***diet*** is the typical foods and beverages that a person consumes. "Diet" can also refer to an individual eating plan. An individual eating plan must ensure that the person receives enough nutrients, while remaining within the calorie recommendations to maintain a desired weight. The U.S. Department of Agriculture's MyPlate website at http://www.choosemyplate.gov/ and the Dietary Guidelines for Americans at https://health.gov/dietaryguidelines/2015/guidelines/ provide healthy eating guidelines. Portion recommendations depend on a person's current weight, age, gender, and activity level. Portion control is important to any food plan. A healthy diet includes grains, vegetables, fruits, dairy, proteins, and fats.

A. GRAINS: The grain group includes food made from wheat, rice, oats, cornmeal, barley, and other cereal grains. Grains provide fiber, carbohydrates, protein, B-vitamins, and antioxidants. The daily recommendation of grains is 6-8 ounces. At least half that intake should be whole grains.

1. *Whole Grain*: ***Whole grain*** is a descriptive term for whole grains or foods made from them that contain 100 percent of the original grain kernel. A grain kernel (or seed) consists of the bran, the germ, and the endosperm. Whole grains include corn, rice, wheat, quinoa, rye, and oats. Examples of whole-grain products are whole-wheat flour, oatmeal, and brown rice. People are encouraged to add whole grains to their diet. Daily food choices can make a huge difference in a person's health. For example, in comparing a serving of white rice with that of a serving of brown rice, the white rice choice results in an approximately 75% loss of antioxidants, magnesium, B-vitamins, and phosphorus. Those nutrients were part of the brown coating, removed through the milling process in order to create white rice.
2. *Refined Grain*: A ***refined grain*** is the term used for grains that are not whole, because they are missing one or more of a grain's key parts (bran, germ, or endosperm). The milling process removes about 25 percent of the protein in a grain, and 50 percent or more of other nutrients (fiber, iron, B vitamins). The milling process results in a finer texture and extends the shelf life of processed foods. Examples of refined grains are white flour and white rice.

B. VEGETABLES: Vegetables provide carbohydrates, vitamins (especially vitamins A and C), folate, minerals including potassium, and fiber. The largest portion of a

meal should be the portion of vegetables. Most people consume less than the recommended daily amount of vegetables, including raw, cooked, fresh, frozen, or canned varieties. The daily recommendation for vegetables is $2^1/_2$-3 cups daily. Vegetable subgroups, based on nutrient content, are:

1. *Dark-Green*: broccoli, collard greens, kale, romaine lettuce, spinach, etc.
2. *Orange and Red*: butternut squash, carrots, pumpkin, sweet potatoes, tomatoes, etc. This group of vegetables should always be a person's first choice as they are considered the most nutritious of the vegetable subgroups.
3. *Beans and Peas*: black beans, chickpeas (and hummus), kidney beans, navy beans, soy beans, etc.
4. *Starches*: corn, green peas, white potatoes, etc. Starchy vegetables, part of many comfort foods, are not as good a choice as other vegetables.
5. *Other*: asparagus, avocado, beets, cabbage, cauliflower, celery, cucumbers, garlic, green beans, green pepper, iceberg lettuce, mushrooms, onions, zucchini, etc.

C. FRUITS: Fruits should be part of any daily diet. Fruits can be fresh, canned, dried, frozen, or in the form of juice. Fruits provide carbohydrates, vitamins, folate, minerals, and especially potassium to the diet. The daily recommendation of fruit is two cups. Popular fruit choices are:

1. *Berries*: strawberries, raspberries, blueberries, etc.
2. *Melons*: cantaloupe, honeydew, watermelon, etc.
3. *100% Fruit Juice*: apple juice, orange juice, etc.
4. *Other*: apples, bananas, grapes, lemons, limes, peaches, pears, pineapple, etc.

D. DAIRY: All fluid milk products are in the dairy category. Some products made from milk (such as cheese and yogurt) are part of this group. The daily recommendation of dairy is three cups.

1. *Fluid Milk*: skim milk, 1% milk, 2% milk, whole milk
2. *Milk-based Dessert*: frozen yogurt, ice cream, etc.
3. *Cheese*: cheddar, mozzarella, Parmesan, cottage cheese, feta, American, etc.
4. *Yogurt*: regular, low-fat, Greek, Australian

E. PROTEIN FOODS: Meat, poultry, seafood, eggs, beans and peas, eggs, nuts, and seeds are in this category. Beans and peas are included in the protein group because they are excellent sources of plant protein, and they also provide other nutrients such as iron and zinc. The daily recommendation of protein is 5-$6^1/_2$ ounces daily. Protein food examples include:

1. *Meats*: beef, pork, venison, etc.
2. *Poultry*: chicken, duck, turkey, goose, etc.
3. *Fish and Shellfish*: catfish, cod, salmon, tuna, clams, crab, shrimp, lobster, sardines, etc.
4. *Beans and Peas*: black beans, chickpeas, hummus, kidney beans, navy beans, pinto beans, soy beans, etc.

5. *Nuts and Seeds*: almonds, cashews, peanuts, pecans, walnuts, peanut butter, sunflower seeds, etc.
6. *Eggs*: Chicken eggs, etc.

F. FATS: ***Fats*** are a major nutrient group that supply the body with energy and help the body absorb certain vitamins. Oils are fats that are liquid at room temperature. Oils are NOT a food group, but they are included as part of a healthy eating pattern because they provide essential nutrients. The daily recommendation is approximately 5-7 teaspoons of oils daily. Some commonly eaten oils include canola oil, corn oil, olive oil, soybean oil, and sunflower oil. Some foods, such as nuts, olives, and avocados, are naturally high in oils. Mayonnaise and soft margarine are mostly oil. Solid fats are fats that are solid at room temperature. Common fats include butter, milk fat, lard, stick margarine, shortening, and partially hydrogenated oil. Solid fats contain more saturated fats and/or trans fats than oils. Solid and liquid fats come in three main categories: unsaturated fats, saturated fats, and trans fats.

1. *Unsaturated*: ***Unsaturated fats*** are fats found in fish (such as salmon) and plant foods (such as avocados). These fats are also found in vegetable oils like soybean, corn, canola, and olive oil. Unsaturated fats are good for heart health. It is recommended that unsaturated fats be used in place of saturated and trans fats. There are two main types of unsaturated fats:
   a. Polyunsaturated fats are either omega-3 fats or omega-6 fats. Omega-3 fats are found in fish, particularly oily fish. Omega-6 fats are found in oils such as safflower and soybean oil, and some specific nuts, such as brazil nuts.
   b. Monounsaturated fats are found in olive and canola oil, avocados and some nuts, such as cashews and almonds.
2. *Saturated*: ***Saturated fats*** are fats found in meat and other animal products, such as butter and cheese. Palm and coconut oils also contain saturated fats. Saturated fats are considered the least healthy category of fats. It is widely believed that eating too much saturated fat can raise blood cholesterol levels and increase the chance of getting heart disease.
3. *Trans*: ***Trans fats*** are, primarily, fats that have been created by adding hydrogen to vegetable oil. This chemical process causes the oil to become solid at room temperature. As a result, the unsaturated fats behave like saturated fats. Most trans fats are often referred to as "hydrogenated" or "partially hydrogenated." Examples of food items that contain trans fats are margarine, fried foods (including French fries), snack foods, and packaged baked goods. Trans fats can raise cholesterol and increase the risk of heart disease. Trans fats should be avoided.

G. PORTION SIZE: Portion size is crucial to maintaining a healthy diet. Whether dining out or snacking at home, portion sizes can be managed.

1. *Visual Cues*: If measuring cups and spoons are not handy, portion size can be estimated by sight. Most estimates can be made by comparing a portion of food to parts of a hand, or to common objects.

a. Grains: One serving of grains (e.g., pasta, rice, cereals) is usually the size of a hockey puck. One cup of pasta is about the size of a fist.
b. Vegetables: One medium potato is the size of a computer mouse. A one-cup serving of vegetables is roughly the size of your closed fist or the size of a baseball. One cup of lettuce is equal to four leaves. Five or six baby carrots are equal to one serving.
c. Fruits: One medium apple or orange is the size of a tennis ball. A cup of cut up fruit is about the size of a closed fist. A serving of dried fruit ($^1/_4$ cup) is usually equivalent to a large egg.
d. Dairy: A serving of dairy depends on whether it is in a solid, liquid, or frozen state. Generally, a serving of ice cream is the size of a golf ball. A serving of milk should be consumed from a juice glass, because people typically drink two or three servings if they drink from larger cups.
e. Meat: A healthy serving is 3 ounces, which typically is the size of a deck of cards or the open palm of a hand.
f. Oils and Fats: One teaspoon of oil or butter is the size of a dice or the tip of the thumb. A serving of peanut butter is about the size of two dice.

2. *Restaurants*: Restaurant portions are often huge. Most restaurants serve at least double the amount of food needed for appropriate servings. There are some tactics that can be used to avoid overeating.
   a. Ask the restaurant server for a to-go box. As soon as the meal is served, place half of it into the to-go box.
   b. Ask the server not to bring the bread basket or the containers of crackers to the table.
   c. Split a meal with someone else.
   d. Eat soup or salad before the entrée to "fill up" on foods with lower calorie counts.
   e. Avoid family-style and buffet restaurants. People tend to help themselves to several servings because the food is directly in front of them.
3. *Snacks*: Snacks are often salty, full of fat, and delicious. Because they taste so good, it is easy to overindulge.
   a. Snack on vegetables instead of carbohydrates. Raw vegetables have approximately 20 calories per cup, while processed snack foods typically have 100 calories per cup. Choosing high-density nutrient foods as snacks helps counteract filling up on empty calories.
   b. Avoid large packages of snacks. Regardless of the reason, the larger the package, the more people unconsciously consume.
   c. Do not eat directly from the package. To avoid unconsciously eating an entire bag of chips or box of cookies, place snacks in a bowl that holds only one serving.
   d. Replace candy bowls or cookie jars with fruit bowls and vegetable trays.

Teaching Strategy: *Many techniques can be used to help students master this objective. Use VM–A to discuss what constitutes healthy eating. Use VM–B to discuss*

the recommended daily intake for each food group. Use VM–C to discuss estimating portion sizes with visual cues.

Objective 2: Describe food allergies and special diet restrictions.

Anticipated Problem: What are common food allergies? What are common food restrictions?

II. Dietary Restrictions

Some people avoid specific foods because of allergies. A ***food allergy*** is a condition caused by an abnormal immune response to food. An ***allergen*** is a substance that causes an allergic reaction. Food allergens are usually proteins. Some people must eat reduced amounts of certain foods because of dietary restrictions based on their current health. Other people, such as vegetarians or vegans, avoid particular food categories based on their personal beliefs.

A. COMMON FOOD ALLERGIES: ***Anaphylaxis*** is a severe, potentially life-threatening allergic reaction. Signs and symptoms include a drop in blood pressure, difficulty breathing, a skin rash, nausea and vomiting. These symptoms can occur within seconds of exposure to an allergen. Common triggers include certain foods.

1. *Shellfish*: All shellfish contain proteins called tropomyosin, which may result in an allergic reaction. Of all allergies, shellfish allergies cause the most severe reactions. A person with a known allergy to one shellfish should avoid all shellfish, or should consider scheduling an appointment for allergy testing at a doctor's office.
   a. Edible shellfish are either crustaceans or mollusks. Crustaceans include shrimp, crab, lobster, and crawfish. Mollusks include clams, scallops, oysters, mussels, octopus, and squid.
   b. Popular shellfish dishes include ceviche (fish or shellfish in an acidic citrus marinade), gumbo, jambalaya, paella, shrimp scampi, and cioppino. Fish sauces are nam prik (Thai) and mam tom (Vietnamese). Clamato® is a mixture of clam broth and tomato juice. It is sometimes used as an ingredient in a Bloody Mary cocktail.
   c. Exposure to non-food items with unexpected shellfish elements may also cause problems for people with serious shellfish allergies. Those with shellfish allergies should avoid Glucosamine, Omega-3 supplements, and calcium supplements, pet food (including fish food), compost or fertilizers, and HemCon bandages (made from shrimp shells).
2. *Nuts*: Tree nut allergies are often serious and may result in anaphylaxis. Cashews and walnuts are the biggest culprits in terms of tree nut allergic reactions. Ninety percent of children diagnosed with these allergies suffer from these conditions for life.
   a. Tree nuts include cashews, Brazil nuts, pecans, walnuts, pine nuts, pistachios, hazelnuts, chestnuts, hickory nuts, and macadamia nuts. More

than 10 percent of people who are allergic to one tree nut have an allergic response to other nuts as well.

b. Although peanuts are legumes and are not biologically related to tree nuts, people with tree nut allergies are likely to also have peanut allergies.

c. Foods that typically include tree nuts and/or peanuts: candy bars, granola bars, divinity, cereals, Nutella®, marzipan, baklava, pesto, trail mix, fudge, and numerous baked goods.

3. *Dairy*: Cows' milk is the most common food allergy in American children. However, children often outgrow dairy allergies. People with these allergies should avoid all milk from grazing animals, including sheep and goats.

   a. Lactose intolerance is different from a milk allergy. ***Lactose intolerance*** is an inability to fully digest the sugar (lactose) in milk. Symptoms of this condition may include diarrhea, gas and bloating, and abdominal cramping.

   b. Other names for milk ingredients that appear on food labels:

      (1) Beta-lactoglobulin
      (2) Casein
      (3) Caseinate (ammonium caseinate, calcium caseinate, magnesium caseinate, potassium caseinate, and sodium caseinate)
      (4) Delactosed or demineralized whey
      (5) Hydrolyzed casein
      (6) Hydrolyzed milk protein
      (7) Lactalbumin
      (8) Lactose, lactoferrin, or lactoglobulin
      (9) Whey and whey protein concentrate

4. *Wheat and other gluten-containing grains*: In the case of an allergy to wheat, the body attacks the allergen. In the case of celiac disease, the body attacks itself. ***Celiac disease*** is an immune reaction to eating gluten. ***Gluten*** is a protein found in wheat, barley, and rye. Celiac disease damages the small intestine and prevents the absorption of nutrients. People with celiac disease should follow a strict gluten-free diet.

   a. Grocery stores are stocking more gluten-free products. Restaurants are listing gluten-free entrées, including pizza, as more and more customers become gluten free.

   b. Obviously, someone with a wheat allergy or celiac disease, should avoid wheat, corn, and rye. Other foods to avoid are couscous, tabbouleh, cracker meal, semolina, bulgar, barley, oats, oatmeal. Any type of flour other than corn, millet, and rice flours, should be avoided. In addition, people with a wheat allergy or celiac disease should not consume pasta, soups, gravies, thickened sauces, hot and cold cereal, baked goods, crackers, breads, pretzels and other snack foods, salad dressings, Worchestershire sauce, soy sauce, and other condiments.

   c. People on a wheat-free or gluten-free diet should not eat products manufactured in a facility where wheat, gluten, or gluten-containing products are prepared and packaged.

d. Wheat products that should be avoided include wheat bran, wheat germ, cornstarch, all-purpose flour, bleached flour, enriched flour, couscous, bulgar, semolina, cracker meal, monosodium glutamate (MSG), farina, vegetable gum or starch, and modified starch and modified food starch.

5. *Eggs*: After dairy products, eggs are the second most common food allergy in children. However, 68 percent of children are likely to outgrow this allergy by the age of 16. Although rare, egg allergies can develop in adulthood. This is more likely to occur in bird owners.
   a. Names on food labels that indicate eggs are present include: albumin, globulin, lecithin, lysozyme, ovalbumine, ovovitellin, egg substitutes (e.g., Egg Beaters®), and egg (powdered, solids, dried, yolk, and white).
   b. Some foods that commonly contain eggs include: puddings and custards, casseroles, mayonnaise, canned soups, energy bars, breaded foods, baked goods, meatloaf and meatballs, remoulade, malted beverages, and protein powders and shakes.
6. *Soy*: Soy food allergies are common to children. As with milk and egg allergies, children are likely to outgrow this condition.
   a. Some foods and ingredients to avoid include textured vegetable protein (TVP), lecithin, hydrolyzed vegetable starch, soy flour, soy nuts, soy sauce, tempeh, tofu, edamame, shoyu, and miso.
   b. Serious soy reactions are likely in those who are allergic to peanuts. However, the number of people allergic to soy who are also allergic to peanuts is surprisingly low.

B. FOOD RESTRICTIONS: Some medical conditions can be managed with dietary restrictions or special diets. Vegetarians or vegans choose their type of diet, not from necessity, but from personal choice.

1. *Diabetes*: ***Diabetes*** is a disease that occurs when blood glucose, also called blood sugar, is too high. The body converts food into glucose. Glucose is the body's main source of energy. ***Insulin*** is a hormone, secreted by the pancreas, which helps glucose get into the body's cells to be used for energy. With diabetes, the body either fails to produce enough insulin, or fails to use insulin as well as it should. Glucose (sugar) then builds up in the blood. Some natural foods (e.g., beets and carrots) are extremely high in natural sugar and should be served in limited amounts, if at all, to diabetics. Diabetics should eat a diet that is low in sugars (e.g., fructose, lactose, and cane sugar) and low in carbohydrates.
2. *High Cholesterol*: ***Cholesterol*** is a fatty substance that is manufactured in the human liver, and also consumed in food. Cholesterol is needed for production of hormones and to help the brain, skin, and other organs function properly. It is derived from animal products, including eggs, meats, butter, cheese, and milk. High cholesterol may result in a dangerous buildup of fatty deposits in the arteries. This could lead to a stroke or heart attack. People diagnosed with high cholesterol are often directed to:
   a. Decrease the intake of fatty foods and salt.

b. Eat fresh fruits and vegetables as well as whole grains and legumes.
c. Limit total fat grams (including those from red meat and dairy products).
d. Avoid simple carbohydrates. Simple carbohydrates (e.g., sugars—raw, brown, corn syrup, glucose, fructose, sucrose) can worsen the condition. Simple carbohydrates to avoid are soda, baked goods, fruit juice concentrates, breakfast cereals, and packaged cookies.
e. Incorporate complex carbohydrates (fibers and starch) into meals. Complex carbohydrates take longer to digest, have more nutrients, and are higher in fiber than simple carbohydrates. Fiber-rich carbohydrates help to control cholesterol and keep the bowels regular. Complex carbohydrates that contain fiber are fruits and vegetables, nuts, beans, and whole grains. Complex carbohydrates that contain starch include whole wheat bread, corn, peas, rice, and cereal grains.

3. *High Blood Pressure*: ***Blood pressure*** is the force exerted by the blood against the walls of the blood vessels. Normal blood pressure is 120 over 80 mm of mercury (mmHg). **Hypertension** is abnormally high blood pressure caused by blood exerting too much force against the wall of blood vessels. High blood pressure is blood pressure measuring more than 130/80 mmHg. High blood pressure (HBP) affects one out of three adults in the United States. If untreated, HBP can lead to coronary artery disease, kidney damage, stroke, and more.
   a. The Dietary Approaches to Stop Hypertension (DASH) diet recommends that people with high blood pressure consume fruits, vegetables, low-fat dairy foods, along with moderate amounts of whole grains, lean cuts of meat, and nuts. The diet is low in red meat, salt, added sugars and fat. The standard DASH diet recommends up to 2,300 milligrams (mg) of sodium per day. A typical American diet can amount to a whopping 3,400 mg of sodium a day or more.
   b. Mrs. Dash® and other salt-free spices can be used to reduce sodium intake. Processed foods usually contain an abundance of salt. Foods on the high-salt-content list include:
      (1) Sauces, marinades, and dressings
      (2) Frozen dinners, including pizza
      (3) Canned items (e.g., beans, vegetables, and soup)
      (4) Processed meats (e.g., sausage and bacon)
      (5) Crackers and cookies
4. *Heart Disease*: Heart disease is the leading cause of death for men and women in the United States. This condition may include one or more of the following: coronary heart disease, heart attack, congestive heart failure, and congenital heart disease. People with heart disease should consume small quantities of fats and sodium, as a poor diet could worsen their conditions. People with heart disease are often directed to follow a Mediterranean diet, which includes lots of fresh fruits and vegetables, fish, chicken, low-fat dairy (typically in the form of yogurt and cheese), and small amounts of red meat.

5. *Obesity*: ***Obesity*** is an excessive amount of body fat. A person is diagnosed as obese when the body mass Index (BMI) is 30 or higher. The principal causes of obesity are inactivity and an unhealthy diet. Obesity increases risk of diseases and health problems, such as heart disease, diabetes, and high blood pressure. Obese people may choose low-fat and low-calorie diets. Low-fat and low-calorie diets should also consider the dietary guidelines for those people with heart or blood sugar issues.

C. VEGAN/VEGETARIAN: A ***vegetarian*** is someone who does not eat any meat, poultry, game, fish, shellfish, or animal by-products. Vegetarian diets contain various levels of fruits, vegetables, grains, nuts and seeds. Depending on the type of vegetarian, eggs and dairy may be included. Proteins for vegetarians often include nuts, beans, tofu, or soy. A ***vegan*** is a vegetarian who does not eat eggs, dairy products, or honey. Plant-based foods have health benefits. A ***phytonutrient (phytochemical)*** is a chemical naturally produced by plants, which has antioxidant and anti-inflammatory properties. Phytonutrients can be found in colorful fruits and vegetables, whole grains, teas, nuts, beans, and spices. [NOTE: For more information about vegetarian and vegan diets, see the following lessons and e-units: CA C10–8 Vegetable Proteins: Vegetarian Diets and CA C10–9 Vegetable Proteins: Vegan Diets.]

Teaching Strategy: *Many techniques can be used to help students master this objective. Use VM–D to lead a discussion of the most common food allergens. Use VM–E to review food restrictions. Assign LS–A.*

Review/Summary.

Use the student learning objectives to summarize the lesson. Have students explain the content associated with each objective. Student responses can be used in determining which objectives need to be reviewed or taught from a different angle.

Application.

Use the included visual master(s) and lab sheet(s) 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: Matching

1. b
2. g
3. e
4. f
5. c

6. h
7. d
8. a

Part Two: Completion

1. refined
2. lactose intolerance
3. salt (or salty foods)
4. DASH
5. cholesterol
6. phytonutrient
7. whole grain
8. vegan

Part Three: Short Answer

Answers will vary and would include five of the following tactics to reduce calorie intake:

1. Ask the restaurant server for a to-go box. As soon as the meal is served, place half of it into the to-go box.
2. Ask the server not to bring the bread basket or the containers of crackers to the table.
3. Split a meal with someone else.
4. Eat soup or salad before the entrée to "fill up" on foods with lower calorie counts.
5. Avoid family-style and buffet restaurants.
6. Snack on vegetables instead of carbohydrates.
7. Avoid large packages of snacks.
8. Do not eat directly from the package.
9. Replace candy bowls or cookie jars with fruit bowls and vegetable trays.

Sample Test

Name _____

Healthy Eating Guidelines

Part One: Matching

Instructions: **Match the term with the correct definition.**

a. allergen
b. diet
c. obesity
d. gluten
e. vegetarian
f. celiac disease
g. fats
h. diabetes

_____1. The typical foods and beverages that a person consumes

_____2. A major nutrient group that supply the body with energy and help the body absorb certain vitamins

_____3. Someone who does not eat any meat, poultry, game, fish, shellfish, or animal by-products

_____4. An immune reaction to eating gluten

_____5. An excessive amount of body fat

_____6. A disease that occurs when blood glucose, also called blood sugar, is too high

_____7. A protein found in wheat, barley, and rye

_____8. A substance that causes an allergic reaction

Part Two: Completion

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

1. _____ grain is the term used for grains that are not whole, because they are missing one or more of a grain's key parts (bran, germ, or endosperm)is termed.

2 An inability to fully digest the sugar (lactose) in milk is called _____.

3. People diagnosed with high cholesterol are often directed to decrease their intake of fatty foods and _____.

4. The _____ diet recommends that people with high blood pressure consume fruits, vegetables, low-fat dairy foods, along with moderate amounts of whole grains, lean cuts of meat, and nuts.

5. A fatty substance that is manufactured in the human liver, and also consumed in food is_____.

6. A chemical, naturally produced by plants, which has antioxidant and anti-inflammatory properties is a _____.

7. Foods that contain 100 percent of the original grain kernel are called _____.

8 A vegetarian who does not eat eggs, dairy products, or honey is a _____.

Part Three: Short Answer

Instructions: **Answer the following.**

Name five tactics to reduce calorie intake.

HEALTHY EATING GUIDELINES

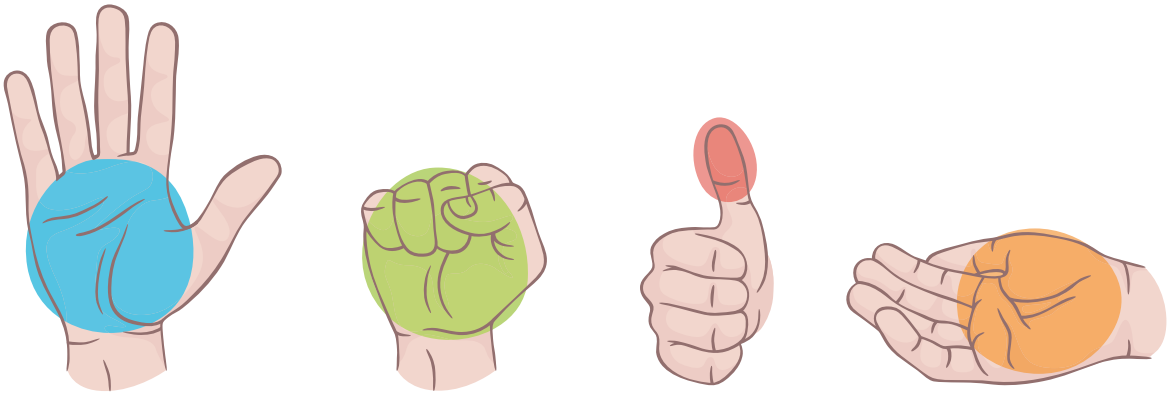
A balance, healthy diet includes fruits, vegetables, proteins, grains, and dairy.

INTAKE RECOMMENDATIONS

Portion recommendations depend on a person's current weight, age, gender, and activity level. Portion control is important to any food plan.

JUDGING PORTIONS: VISUAL CUES

Portions can be estimated using visual cues.



PROTEIN	VEGETABLES	FAT	CARB

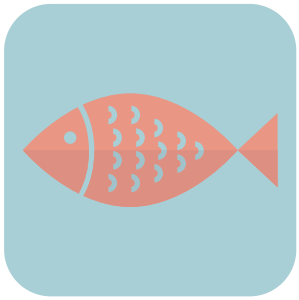
FOOD ALLERGIES

An allergen is a substance that causes an allergic reaction. Food allergens are usually proteins.

FOOD ALLERGENS

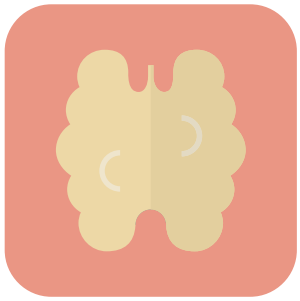
The Big-8


Milk


Fish

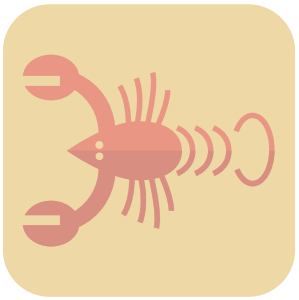

Peanuts


Soybean


Tree Nuts

Eggs


Wheat


Crustacean Shellfish

FOOD RESTRICTIONS

Some medical conditions, such as diabetes and hypertension, can be managed with dietary restrictions or special diets.

Name _____

A Low-Fat Diet Tip Sheet

Purpose

The purpose of this lab activity is to create a low-fat diet tip sheet.

Objectives

1. Research low-fat diets.
2. Create a low-fat diet tip sheet.
3. Write a summary of obstacles to following a low-fat diet.

Materials

- lab sheet
- device with internet access
- writing paper
- pen or pencil
- optional: ingredients, supplies, equipment to prepare one low-fat recipe

Procedure

1. Research low-fat diets. List facts that low-fat diets have in common.

2. Create a tip sheet to help a person follow a low-fat diet. Include:
   a. Food Selection (e.g., categories, types, form (fresh, frozen, canned, etc.):

   b. Food Label Interpretation:

   c. Healthy Habits (e.g., routine, snacks, cooking techniques, etc.):

   d. OTHER category: _____

3. Attach three low-fat recipes that someone might enjoy in a low-fat diet.
4. OPTIONAL: Prepare one low-fat recipe for tasting.
5. Evaluate your research and the recipes you selected. Based on your research, write a summary of any obstacles (e.g., age, food restrictions, allergies, activity level, etc.) you would have in following a low-fat diet.

6. Participate in a class discussion of your low-fat diet research and conduct the taste testing.
7. Turn your completed lab sheet and low-fat recipes in to your instructor.