State 4-H
Food & Nutrition Quiz Bowl
Study Guide
2008

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Disclaimer: The objectives listed are designed to help 4-H members study for the state 4-H Food and Nutrition Quiz Bowl. **In no way is this list of objectives to be viewed as the list of questions that will be asked.** Questions will be based on the concepts and objectives outlined in the guide.

References: To address the identified objectives, teams and coaches should consult with the references below. For each objective, at least one appropriate reference is given.

The names of the references are abbreviated as follows:

1. **ADA** = American Dietetic Association's Complete Food and Nutrition Guide, **3rd edition**
   Roberta Larson Duyff, MS, RD, CFCS
   2006, John Wiley & Sons, Inc.
   ISBN 0-470-04115-3

2. **FOOD** = AAFCS Food: A Handbook of Terminology, Purchasing, and Preparation, 11th edition
   American Association of Family and Consumer Sciences
   2006, ISBN 0-8461-0005-3
   This reference can be ordered from AAFCS at www.aafcs.org.

3. **Texas Cooperative Extension publications**
   Nutrient Needs at a Glance L-1875
   Safe Home Food Storage B-5031

4. **USDA publications related to the Dietary Guidelines for Americans and the Food Guide**

   Food Guide (MyPyramid) = MyPyramid mini-poster
   http://www.mypyramid.gov/downloads/MiniPoster.pdf

   Dietary Guidelines (DGA) = Finding Your Way to a Healthier You
   http://www.health.gov/dietaryguidelines/dga2005/document/pdf/brochure.pdf

After each reference, the page number(s) that address each objective is listed. **For official Quiz Bowl contest rules, consult the Texas 4-H Quiz Bowl Guide (4H 3-2.030).**

Category I: Basic Nutrition

A. Carbohydrate

1. Know the energy content of carbohydrates. (ADA, 113)

2. Compare simple versus complex carbohydrates. Be able to give examples of each. (ADA, 112-113)

3. Discuss the popular myths about sugar (example: sugar causes hyperactivity). (ADA, 118-121)

4. Discuss lactose intolerance with respect to signs/symptoms, cause, and recommended treatment. (ADA, 524-526)

5. Define fiber, and be able to distinguish between soluble, insoluble, beta glucan, and whole grain forms. Be able to list/identify food sources of each type of fiber. (ADA, 133-135)

6. According to the American Dietetic Association, how many grams of fiber should adults try to include in their diets? Discuss what might happen if too much fiber is consumed. (ADA, 137-138)

7. Discuss ways a healthy person can increase the amount of fiber in his/her diet. (ADA, 137-144)

8. According to the Institute of Medicine, what percentage of our energy should come from carbohydrates? (ADA, 114)

9. Describe the health benefits of dietary fiber. (ADA, 133-136)

10. Discuss the link between dietary carbohydrates and the development of tooth decay (caries). (ADA 115-118)

11. What words on a food label, other than "sugar," indicate that a food has added sugar? (ADA, 123)

12. Discuss the artificial sweeteners including acesulfame K, aspartame, saccharin, sucralose, tagalose, and neotame including sweetness compared to sugar, caloric content, and use in cooking. (ADA, 127-131)

B. Protein

1. Discuss the energy content of protein. (ADA, 25)

2. Discuss the functions of protein. (ADA, 500-502)

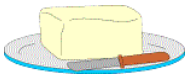
3. What is a complete protein? What are food sources of these types of proteins? (ADA, 507)

4. What is an incomplete protein? What are food sources of incomplete proteins? (ADA, 507-508)

5. Generally speaking, what percentage (range) of our calories should come from protein? (ADA, 25)

6. How might protein help someone manage their weight? (ADA, 236)

C. Fat



1. Understand the importance of dietary fat. (ADA, 53-54)

2. Know the energy content of dietary fat (kcal/gram). (ADA, 25)

3. Know the difference between saturated, monounsaturated, and polyunsaturated fatty acids. (ADA, 55-56)

4. Identify major food sources of monounsaturated fats. (ADA, 55)

5. Identify major sources of polyunsaturated fats. (ADA, 55)

6. Identify major sources of saturated fats. (ADA, 55)

7. Describe how a trans fatty acid is made. (ADA, 58) Why should consumers be concerned about trans fats? (ADA, 56-58)

8. Discuss sources of cholesterol available to our body. Where does our body get cholesterol? (ADA, 55, 64-68)

9. Identify food sources that contain high amounts of cholesterol. (ADA, 64-68)

10. Explain the recommendations for dietary fat, saturated fat, and cholesterol. (ADA, 68)

11. Generally speaking, how do the following dietary fats affect blood lipid levels: saturated, monounsaturated, polyunsaturated, omega-3, and trans? (ADA, 57)

12. Be able to distinguish between saturated-fat-free, low saturated fat, fat-free, low-fat, and reduced fat foods. (ADA, 73)

D. Vitamins

1. Be able to describe the differences between water-soluble and fat-soluble vitamins. (ADA, 75)

2. Discuss the fat-soluble vitamins (A,D,E,K) with respect to their major functions, what happens if you consume too much of the vitamin (excess/toxicities), and what happens if you don't get enough (deficiencies). Be able to identify major food sources of each fat-soluble vitamin. Are there any fat-soluble vitamins that can be made by our body? If so, which ones and how?
(ADA,76-90; Texas Cooperative Extension L-1875, Nutrient Needs at a Glance)

3. Discuss the water-soluble vitamins (B-vitamins and C) with respect to functions, signs of a deficiency, and signs of toxicities. Be able to identify major food sources of each water-soluble vitamin. Are there any water-soluble vitamins that can be made by our body? If so, which ones and how? (ADA, 76-90; Texas Cooperative Extension, L-1875 Nutrient Needs at a Glance)

E. Minerals

1. Discuss the following minerals with respect to (1) functions in the body, (2) signs of a deficiency, (3) what happens if you consume too much of the mineral, (4) and major food sources of that mineral: calcium, phosphorus fluoride, iodine, iron, potassium, selenium, sodium and zinc.
(ADA, 91-106; Texas Cooperative Extension L-1875 Nutrient Needs at a Glance)

F. Fluids

1. What role(s) does water play in the body? (ADA, 155-156)

2. What percentage of an adult's body weight is attributed to water? (ADA, 155)

3. Generally speaking, how long could a person live without water? (ADA, 154)

4. Discuss the general recommendation for water intake and the factors that may affect that recommendation. (ADA, 156-158)

5. What is the difference between hard and soft water? (ADA, 160-161)

6. Bottled water can be one of several types. What is the difference between artesian water, mineral water, purified water, sparkling water, and spring water? Which government agency regulates bottled water? (ADA, 161-163)

7. Discuss sources and health effects of caffeine. (ADA 168-169)

G. Miscellaneous

1. Be able to discuss the difference between a food that is enriched and a food that is fortified. (ADA, 197)

2. Which government agency is responsible for the regulation of food additives? (ADA, 200-201)

3. When discussing food additives, what is meant by the initials GRAS? (ADA, 198)

4. Discuss the following categories of food additives with respect to their function(s) in food preparation/processing: (ADA, 197-199)
   (a) emulsifiers
   (b) anti-caking agents
   (c) humectants
   (d) leavening agents
   (e) pH control agents
   (f) thickeners & stabilizers
   (g) anti-oxidants
   (h) anti-microbial agents
   (i) citric acid
   (j) sodium nitrite
   (k) tocopherols

6. Why are foods irradiated? (ADA, 195-196)

7. Understand the components of the USDA Food Guide. (MyPyramid)

8. Understand the recommendations for physical activity outlined by the Dietary Guidelines for Americans. (DGA)

9. Based on the Dietary Guidelines for Americans, what is the recommendation for sodium? (DGA)

10. Understand the Dietary Guidelines for Americans' recommendations for fruits, vegetables, calcium-rich foods (including milk), grains, and protein. (DGA)

11. What are phytonutrients/phytochemicals? How might the following phytochemicals be beneficial to our health: beta carotene, lutein, lycopene, anthocyanidins, flavanols, soy protein, phytoestrogens? (ADA 108-111)

12. Which government agency monitors pesticide residues in food? (ADA, 203)

13. What is meant by the term "organically grown"? What are the benefits and disadvantages of organically produced food? (ADA, 205-206)

14. What are the proposed benefits of genetically modified foods? (ADA, 207-209)

Category II: Food Preparation Skills and Storage

Note: Proper food preparation and storage requires skills and knowledge in food safety. Therefore, many of these objectives address food preparation/storage and food safety.

A. Milk & Milk Products

1. Understand the recommended guideline(s) for the storage of butter, including temperatures and length of time. (FOOD, 64; Texas Cooperative Extension B-5031, Safe Home Food Storage, 6)

2. Natural cheese, process cheese, and cream — know the different categories and the standards that must be met. (FOOD, 64-65)

3. Understand the recommended guideline(s) for the storage of cheese, including temperatures and length of time. (FOOD 64-65)

4. Discuss the benefits of milk pasteurization. (FOOD, 67)

5. Why is milk homogenized? (FOOD, 67)

6. Understand the recommended guideline(s) for the storage of milk and buttermilk including length of time. (FOOD, 69; Texas Cooperative Extension B-5031, Safe Home Food Storage, 6-7)

7. Explain the differences between ice cream, ice milk, and sherbet. (FOOD, 69-70)

B. Meat/Fish/Poultry/Eggs

1. Compare roasting, oven broiling, and grilling as dry heat cooking methods. (FOOD, 77)

2. Discuss the three methods of cooking in liquid. (FOOD, 81)

3. Discuss how to determine the degree of doneness (using a meat thermometer) for beef, lamb, veal, pork, and ham. (FOOD, 82)

4. Discuss using the microwave to cook meats, including methods to promote even cooking. (FOOD, 84)

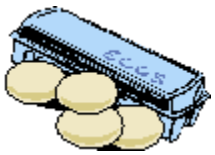
5. Describe methods for determining freshness of fresh fin fish, fresh shellfish, and frozen fish. (FOOD, 85-86)

6. Understand the recommended guidelines for the storage of fish products, including the amount of time products can be refrigerated/frozen before use and proper storage and thawing methods. (FOOD, 86-87; Texas Cooperative Extension B-5031, Safe Home Food Storage, 7)

7. Describe how to determine if fish is properly cooked. Include a general method to estimate the amount of time needed to cook fish. (FOOD, 88-89)

8. Understand the recommended guidelines for the storage of poultry products including the amount of time turkey and chicken products can be refrigerated/frozen before use, and proper storage and thawing methods. (FOOD, 92-96; Texas Cooperative Extension B-5031, Safe Home Food Storage, 10)

9. Discuss the whipping properties of eggs, and describe the conditions for getting the best results. (FOOD, 98)



10. Discuss the use of microwaves for preparing eggs. Include situations where caution should be used. (FOOD, 98)

11. Discuss the proper care and handling of eggs (FOOD, 98)

12. What is the purpose of "beating" egg whites when preparing omelets? (FOOD, 98)

13. What is the proper procedure(s) for handling and storing frozen egg products, liquid egg products, and dried egg products? (FOOD, 99-100)

C. Fruits

1. Discuss different uses for apples, including examples of specific types of apples for each use. (FOOD, 101)

2. Understand the recommended guidelines for the storage of fresh fruits, including methods to achieve and maintain ripeness/freshness. (FOOD, 102-103; Texas Cooperative Extension, B-5031, Safe Home Food Storage, 8)

3. Discuss what to look for and what to avoid when choosing apples, avocados, bananas, blueberries, cantaloupes, grapefruit, grapes, honeydew, kiwifruit, oranges, peaches, pears, strawberries, and watermelon. (FOOD, 103-107)

D. Vegetables

1. Be able to identify the crucifers. (FOOD, 108)

2. Understand the recommended guidelines for the storage of canned, frozen, and dried vegetables including best storage temperatures and length of time. (FOOD, 108-109; Texas Cooperative Extension, B-5031 Safe Home Food Storage, 13)

3. Understand the recommended guidelines for the storage of fresh vegetables, including best storage temperatures to maintain freshness and length of time. (FOOD, 113; Texas Cooperative Extension, B-5031 Safe Home Food Storage, 12)

4. Discuss what to look for and what to avoid when choosing asparagus, broccoli, corn, lettuce, peas, peppers, potatoes, squash, and tomatoes. (FOOD, 109-113)

5. Discuss what determines the amount of time needed to cook a vegetable. (FOOD, 114)

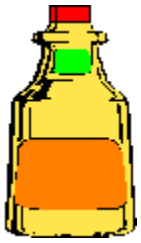
E. Grain Products

1. Discuss the difference between cornmeal, enriched cornmeal, corn grits, hominy, and cornstarch. (FOOD, 119)

2. Understand the recommended guidelines for the storage of grain and cereal products including refrigeration/freezing and length of time. (FOOD, 122-124; Texas Cooperative Extension, B-5031 Safe Home Food Storage, 6)

3. Compare the following types of flour: all-purpose, bread, semolina, soy enriched, and self-rising. (FOOD, 121-123)

F. Fats and Oils



1. What is the difference between fats and oils? (FOOD, 127)

2. Discuss the origin and uses of animal fat shortenings (lard, tallow). (FOOD, 128; Texas Cooperative Extension, B-5031 Safe Home Food Storage, 11)

3. Discuss the differences among canola oil, olive oil, tropical oils, sesame oils, and marine oils including any distinguishing nutritional factors and reasons for use. (FOOD, 128-131)

4. Discuss the recommended guidelines for the storage of various fats, vegetable shortening, and oils. (FOOD, 132)

5. Discuss the definition of smoke point (pertaining to fats and oils) and its importance when frying with fats and oils. (FOOD, 132)

G. Food Preservation

1. Explain the differences between hot pack and raw pack methods of packing tomatoes and other vegetables and fruits into jars. (FOOD, 170)

2. Differentiate between jelly, jam, freezer jam, conserves, marmalade, preserves, and fruit butter. (FOOD, 172-173)

3. Discuss how to package fruits and vegetables for freezing. What types of food should not be frozen? (FOOD, 175-178)

4. Can an individual use a microwave oven to dry fruits? Why or why not? (FOOD, 167)

5. Discuss characteristics of a quality freezer container that should be used when freezing foods. (FOOD, 174)

6. What are the 2 types of canners used for home food preservation? (FOOD, 168-170)

7. When canning low acid foods, what type of canner should be used? (FOOD, 167-169)

8. How often should a consumer test the accuracy of a pressure canner dial gauge? What determines if/when the pressure gauge should be replaced? (FOOD, 168)

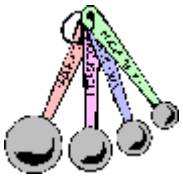
9. Discuss tips to following when drying, canning, and freezing to ensure a safe and quality product. (FOOD, 167-168)

10. When pressure canning, how does altitude affect the amount of pressure used? (FOOD, 168)

11. What is blanching? What types of foods are blanched and why? (FOOD, 176)

12. Discuss the two ways that vegetables can be packed for freezing. (FOOD,178)

H. Weights, Measures, and Can Sizes



1. Understand the common units of weight and volume. Be able to convert from one unit to another (e.g., 16 tablespoons = 1 cup). (FOOD, 38-39)

2. Know the approximate measure (in cups) of commercial sized cans. (FOOD, 165-166)

I. Miscellaneous

1. Describe the differences between raw sugar, granulated white sugar, powdered sugar, and brown sugar including uses for each. (FOOD, 125)

2. What is yeast, how does it work, and in what forms can it be purchased? (FOOD, 134)

3. Identify/define the following food science terms: chlorophyll, dehydration, hydration, kilocalorie, kosher, leavening agent, pickling, rancidity, rennet, smoke point, sterilize, viscosity. (FOOD, 50-52)

4. Identify/define the following cooking terms: baste, blend, boil, braise, broil, caramelize, dredge, Fricassee, garnish, julienne, lukewarm, macerate, meringue, rehydrate, saute. (FOOD, 53-56)

5. Identify/define the following international menu items: a la carte, al dente, au jus, baklava, bisque, bouillabaisse, bouillon, bratwurst, caviar, chitterlings, chorizo, crepes, curry, du jour, entree, hassenpfeffer, hollandaise sauce, kim chee, matzos, pareve, pita, roux. (FOOD, 57-63)

Category III: Nutrition and Health

A. Obesity

1. What is Body Mass Index (BMI); how is it calculated, and what do the numbers mean? (ADA, 21-22)

2. What are the health risks associated with being overweight and/or obese? (ADA, 29-31)

3. Some people are pear-shaped while others are shaped like an apple. What does this mean? Discuss any health risks associated with being a pear or an apple. (ADA, 23-24).

4. How many calories make up one pound of fat? (ADA, 29)

5. Understand the meaning of the following terms often found on food labels: calorie free, reduced, high, good source, light, healthy, lean, extra lean, low calorie, reduced or fewer calories, lite, and low calorie meal. (ADA, 39)

6. Understand the difference between the terms "obese" and "overweight." (ADA, 29)

7. What are the health consequences of being too thin? (ADA, 42)

B. Blood Pressure/Heart Disease

1. List risk factors for developing heart disease. Why should we be concerned about heart disease? (ADA, 544-546)

2. What is cholesterol, and how is it connected to heart disease? (ADA, 545-546)

3. Discuss the differences between HDL- and LDL-cholesterol. (ADA, 545-546)

4. What are some ways to increase the HDL blood level and decrease the LDL-blood level? (ADA, 546)

5. What are some factors leading to elevated cholesterol levels? Which factor is most significant? (ADA, 546)

6. How can soluble fiber help lower blood cholesterol levels? What are good food sources of this type of fiber? (ADA, 547)

7. What are triglycerides? What causes blood triglycerides to become elevated? What are some ways to reduce triglycerides? (ADA, 549-550)

8. What is high blood pressure (also known as hypertension)? What are some of the health risks associated with high blood pressure? (ADA, 553-554)

9. What are some of the risk factors for developing high blood pressure? (ADA, 555)

10. As a general guideline, what nutrient may be responsible for high blood pressure in <u>some</u> hypertensive individuals? What amount of this nutrient should your diet be limited to in order to serve as a precaution against high blood pressure? (ADA, 555)

11. There are two nutrients that may help promote optimal blood pressure if they are consumed in adequate amounts. What are these two nutrients? (ADA, 557)

12. What is syndrome X, and how may it be linked to heart disease? (ADA, 545)

13. Understand the difference between normal/desirable, borderline high, and high/very high levels of total cholsterol, LDL cholesterol, HDL cholesterol, and triglycerides. Understand what HDL cholesterol levels mean in terms of heart disease risk. (ADA, 550)

14. In the treatment of high cholesterol levels, what does "TLC" mean? (ADA, 551-552)

15. How are normal, prehypertension, and high blood pressure levels defined? (ADA, 556)

C. Cancer

1. What is cancer? What are some of the known risk factors? (ADA, 559)

2. Discuss the role antioxidants play in combating free radicals/oxidation. (ADA, 87-91)

3. Generally speaking, what are some ways that we can change our eating habits to lower our risk of cancer? (ADA, 560)

D. Osteoporosis

1. What is osteoporosis? (ADA, 575)

2. What are the dietary and non-dietary risk factors associated with osteoporosis? (ADA, 576-577)

3. Why are women more likely to develop osteoporosis? (ADA, 576)

4. Discuss the progression of osteoporosis, including why early prevention is so important. (ADA, 576)

5. How does vitamin D play a role in bone formation? (ADA, 578)

6. What is considered to be the recommended adequate intake (AI) of calcium for different ages and stages of life? (ADA, 578)

7. What are the advantages of getting calcium from dairy foods rather than from fortified foods and/or supplements? (ADA, 595)

E. Diabetes

1. What is diabetes? What are some of the symptoms? (ADA, 559)

2. Compare and contrast the different types of diabetes (Type I, Type II, Gestational). (ADA, 566)

3. What are risk factors for developing Type II diabetes? (ADA, 567)

4. What health problems can be associated with diabetes if the disease is not well controlled? (ADA, 557)

5. Discuss the importance of regular meal timing, testing blood sugar levels, physical activity, and maintaining a healthy weight for good control of diabetes. (ADA, 567-575)

F. Anemia

1. What is anemia, and what are some of its symptoms? (ADA, 583-584)

2. What nutrient deficiencies are linked to anemia? (ADA, 584-587)

3. Why does a lack of iron cause anemia? (ADA, 104, 575)

4. Discuss possible reasons why young to middle-aged women need more iron in their diets than men. (ADA, 584)

5. Discuss good food sources of iron; compare heme vs non-heme sources. (ADA, 105-106)

6. What is a good way to improve absorption of iron from plant sources? (ADA, 106)

G. Feeding Infants and Children

1. Explain the benefits of breastfeeding — for both the mother and the infant. (ADA, 373-376)

2. What is colostrum, and how does it protect a newborn from infections? (ADA, 375)

3. What is the minimum age that infants are ready to begin eating solid foods? (ADA, 388-389)

4. What is the minimum age that iron-fortified cereals and strained fruits and vegetables should be introduced to infants? (ADA, 388-389)

5. What is the minimum age that strained meats/poultry, toast and teething biscuits are introduced to infants? (ADA, 388-389)

6. What is the minimum age that chopped soft fruits and vegetables, meats, unsweetened dry cereals, plain soft bread and pasta are introduced to infants? (ADA, 388-389)

7. Why should infants not be given solid foods from a bottle? (ADA, 388)

8. What type of cereal is least likely to cause an allergic reaction in infants? (ADA, 390)

9. Why should infants not be fed directly from a jar? (ADA, 396)

10. Why is it not safe to give infants honey or corn syrup before their first birthday? (ADA, 391)

11. What are the physical signs that an infant is developmentally ready to try solid foods? (ADA, 388-389)

12. Why should wheat cereals be introduced to infants after they reach 1 year of age? (ADA, 390)

H. Nutrition for Older Adults

1. There are several risk factors for poor nutrition that have been identified for older adults. Be able to list them. (**Hint**: DETERMINE) (ADA, 469)

2. Why might some older adults benefit from a vitamin D supplement? (ADA, 462)

3. How does an older person's sense of thirst change? (ADA, 459, 464-465)

I. Vegetarian Diets

1. Compare and contrast lacto-ovo vegetarians, lacto-vegetarians, and vegans. (ADA, 505)

2. A vegan diet that is not well planned may be lacking in several nutrients. What are these nutrients? (ADA, 506)

3. Name one potential health benefit from following a vegetarian diet. (ADA, 504)

J. Dietary Supplements

1. Who might benefit from a vitamin and/or mineral supplement? (ADA, 501, 592-593)

2. Name one tip for selecting a vitamin/mineral supplement. (ADA, 611)

3. Define "ergogenic aid" and be able to give examples of supplements advertised as ergogenic aids. (ADA, 501-503, 601)

4. Which federal agency regulates the advertising of dietary supplements? (ADA, 601)

5. Discuss common myths about dietary supplements. (ADA, 523)

6. Who might benefit from a calcium supplement? What should one consider when selecting a calcium supplement? Which types of calcium supplements should be avoided? How should one take a calcium supplement to get the best benefit? (ADA, 595-596)

K. Food Allergies

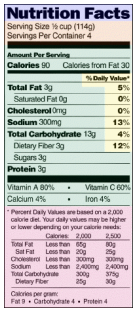
1. What is the difference between a food allergy and a food intolerance? (ADA, 526)

2. Which foods are most likely to cause allergic reactions in adults and in children? How long do food allergies last? (ADA, 532-533)

3. What are the three most common symptoms of a food allergy? (ADA, 532-533)

4. Understand gluten intolerance: what it is and how it is treated. (ADA, 526-529)

Category IV: Consumer Information


Nutrition Facts
Serving Size ½ cup (114g)
Servings Per Container 4
Amount Per Serving
Calories 90 Calories from Fat 30
% Daily Value*
Total Fat 3g 5%
Saturated Fat 0g 0%
Cholesterol 0mg 0%
Sodium 300mg 13%
Total Carbohydrate 13g 4%
Dietary Fiber 3g 12%
Sugars 3g
Protein 3g
Vitamin A 80% • Vitamin C 60%
Calcium 4% • Iron 4%
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:
Calories 2,000 2,500
Total Fat Less than 65g 80g
Sat Fat Less than 20g 25g
Cholesterol Less than 300mg 300mg
Sodium Less than 2,400mg 2,400mg
Total Carbohydrate 300g 375g
Dietary Fiber 25g 30g
Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

A. Food Label

1. What is meant by % daily value? (ADA, 75)

2. Health claims on food labels are regulated by which government agency? (ADA, 250)

3. Discuss the features of the Nutrition Facts panel. (ADA, 245-253)

4. Identify the mandatory nutrients listed on the food label. Why are these nutrients listed while other nutrients are not always listed? (ADA, 247)

5. Why might % Daily Values not apply to everyone? (ADA, 247-248)

6. What determines the order of the ingredient list? (ADA, 245)

7. Why is it important to list ingredients on the food label? (ADA, 249)

8. How do structure/function claims differ from health claims on food labels? (ADA, 250)

9. Identify and discuss kosher symbols, including the meaning of the symbol. (ADA, 252)

10. Discuss health warnings for special conditions that might appear on the food label. (ADA, 251)

11. What are the differences between foods labeled "100% organic," "organic," and "made with organic ingredients"? (ADA, 252).

B. Food Standards

1. Describe the different grades of meats. (FOOD, 75)

2. Describe the different grades of fish. (FOOD, 90)

3. Describe the different grades of poultry. (FOOD, 92)

4. Describe the different grades of eggs. (FOOD, 96-97)

5. Describe the different grades of fruits and vegetables. (FOOD, 101, 108)

C. Miscellaneous

1. Discuss the purpose of the Universal Product Code. (ADA, 253)

2. When evaluating nutrition information on a website, what are some things one should look for to make sure the website is credible? (ADA, 624-626)

3. What roles do the U.S. Postal Service, the Food and Drug Administration, and the Federal Trade Commission play when it comes to fighting nutrition quackery/fraud? (ADA, 629)

V. Kitchen and Food Safety

A. Food Safety at the Grocery Store

1. Know the difference between the following terms commonly found on food packages (ADA, 252; Texas Cooperative Extension, B-5031 Safe Home Food Storage, 4):
   a. "sell-by" or "pull" date
   b. "use by" or "best if used by (before) date"
   c. "pack date"

2. After purchasing perishable foods, they should be stored within a certain amount of time to maintain safety. What is the recommended length of time? (ADA, 279)

3. Understand the general guidelines for using a slow cooker to cook foods safely. (ADA, 299)

B. Foodborne Illness

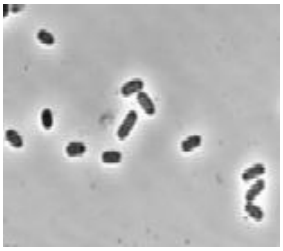
1. Anyone can get a foodborne illness. However, some groups of individuals are more susceptible to a foodborne illness. Name them. (ADA, 283)

2. What is the "Danger Zone"? How does temperature play a role in preventing foodborne illness? (ADA, 281)

3. What do bacteria need to survive and multiply? (ADA, 281)

4. Be familiar with the following bacteria with respect to: (a) where they are found, (b) how soon a person may experience a foodborne illness from the bacteria, (c) foods that are commonly associated with the bacteria, (d) how the illness is transmitted, (e) common symptoms of the foodborne illness associated with the bacteria, and (f) ways to prevent foodborne illnesses associated with the different bacteria. (ADA, 281-284)

a. Salmonella
b. Campylobacter
c. Clostridium perfringens
d. Staphylococcus aureus
e. Listeria monocytogenes
f. Clostridium botulinum
g. Escherichia coli
h. Vibrio vulnificus



5. List some common food safety mistakes or unsafe food handling practices. (ADA, 288-292)

6. Why should a consumer not roast meat at low oven temperatures (less than 325 degrees F) for long periods of time or even overnight? (ADA, 299)

7. To what temperature should leftovers be reheated? (ADA, 299; Texas Cooperative Extension, B-5031 Safe Home Food Storage, 5)

8. Refrigerators should be kept within what recommended temperature range? (ADA, 290)

9. How should food you suspect may be contaminated be handled by a person? (ADA, 282; Texas Cooperative Extension, B-5031, Safe Home Food Storage, 5)

10. How might a person become infected with Hepatitis A? (ADA, 288)

11. How might a person contract trichinosis (Trichinella spiralis)? (ADA, 284)

12. How might a person become infected with the parasite toxoplasmosis? Know direct and indirect methods of exposure to this parasite. Who is at special risk? (ADA, 284)

13. Know/understand the situations for which a person should see a doctor due to a suspected foodborne illness. (ADA, 286)

14. Discuss what a consumer should do if his/her freezer stops. How do you know whether to refreeze or discard meat, poultry, vegetables, or cooked foods? (ADA, 292-294)

C. Keeping Your Kitchen Safe from a Foodborne Illness

1. Know the steps for proper hand washing. (ADA, 288)

2. Define cross contamination, and give an example as to how this may occur. (ADA, 289-290)

3. Know the proper temperatures for storing food in the pantry, refrigerator, and freezer. (ADA, 290-292)

4. What types of dishes are not safe for use with food and why? (ADA, 291)

5. What is the best method for storing cooked foods so they are cooled rapidly? (Texas Cooperative Extension B-5031, Safe Home Food Storage, 5)

6. Where is the best place in the refrigerator to store raw meat, fish, poultry, and eggs and why? (ADA, 290)

7. What is "freezer burn," and how does it affect food? (ADA, 292)

8. Understand basic principles of safe food preparation and service. (ADA, 295-303)

9. Understand how to tell when an egg is properly cooked based on the method used. (ADA, 302-303)

10. When is it safe to re-freeze a frozen food that has been partially thawed? (Texas Cooperative Extension, B-5031, Safe Home Food Storage, 4; ADA, 293-294)

11. Name the four main principles of Fight Bac! (FOOD, 49).