**TEXAS CTE LESSON PLAN**

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| **Lesson Identification and TEKS Addressed** | |
| **Cluster** | Human Services |
| **Course** | Lifetime Nutrition and Wellness |
| **Lesson/Unit Title** | ChooseMyPlate – Protein Foods and Trace Minerals |
| **TEKS Student Expectations** | **130.274. (C) Knowledge and Skills**  (2) The student understands the role of nutrients in the body.  (A) The student is expected to classify nutrients, their functions, and food sources and compare the nutritive value of various foods  (B) The student is expected to assess the effects of nutritional intake on health, appearance, effective job performance, and personal life  (6) The student demonstrates knowledge of food management principles.  (G) The student is expected to demonstrate food preparation techniques to reduce overall fat and calories  (E) The student is expected to apply food storage principles  (7) The student demonstrates effective work habits.  (A) The student is expected to participate as an effective team member demonstrating cooperation and responsibility |
| **Basic Direct Teach Lesson** | |
| **Instructional Objectives** | **Students will:**   * Focus on protein foods and their health benefits * Analyze trace minerals for their functions and food sources * Determine the effects of trace minerals * Plan and prepare a protein foods recipe |
| **Rationale** | Foods in the meat, poultry, fish, eggs, nuts, and seeds group provide nutrients that are vital for health and maintenance of your body. However, choosing foods from this group that are high in saturated fat and cholesterol may have unhealthy implications. |
| **Duration of Lesson** | Four 45-minute class periods |
| **Word Wall** | **Functions:** To serve a purpose  **Iron-deficiency Anemia:** Having too few red blood cells  **Nutrients:** A chemical substance, such as protein, carbohydrates, fat, or fiber, that your body needs to function, grow, repair itself and create energy  **Pica:** A craving for things that are not normally eaten  **Sources:** The place, person, or thing through which something has come into being or from which it has been obtained  **Trace Minerals:** Minerals that are needed for nutrition in amounts of less than 100 mg a day |
| **Materials/Specialized Equipment Needed** | **Equipment:**   * Computer with Internet access for multimedia presentations * Computer lab with Internet access (be sure to follow school district guidelines)   **Materials:**   * Magazine pictures of protein food * Protein food replicas (if available)   **Supplies:**   * Replica of MyPlate (if available) * Copies for handouts   **PowerPoint:**   * Trace Minerals   **Technology:**   * Free iPad App   + Calorie Counter by Fat secret for iPad Easily keep track of your meals, exercise, and weight.<https://itunes.apple.com/us/app/calorie-counter-by-fatsecret/id364140848?mt=8>   **Graphic Organizers:**   * ChooseMyPlate – Protein Foods * ChooseMyPlate – Protein Foods (Key) * Trace Minerals * Trace Minerals (Key)   **Handouts:**   * Eat Seafood * Get Lean with Protein * High Quality Protein Promotes Optimal Health * Myplate Protein * Protein Foods * Rubric for Laboratory Experience – Protein Foods * Substitutions for Healthier Cooking and Baking * Surprising Facts about Lean Beef   **Cookbooks:**   * Fast and Easy Recipes * Healthy Recipes * More Great Recipes! |
| **Anticipatory Set** | **Note to Teacher:**  The introductory lesson to the nutrients, ChooseMyPlate, and SuperTracker is:   * Nutrition Principles for a Lifetime of Wellness   This is the fourth lesson of six that follows the ChooseMyPlate food groups. The others include:   * ChooseMyPlate – Fruits and Water-Soluble Vitamins * ChooseMyPlate – Vegetables and Fat-Soluble Vitamins * ChooseMyPlate – Grains and Carbohydrates * ChooseMyPlate – Dairy, Major Minerals, and Electrolytes * ChooseMyPlate – Oils and Fats   These lessons may be taught individually in any sequence you prefer or may be taught as a whole.  The functions, food sources, deficiencies and excesses on the slide presentation were compiled using three different texts. You may use information from your text or a reliable source to complete these sections.  **Before class begins:**  Review recipes from the cookbooks provided by the SNAP-Ed Connection Recipe Finder Database. Recipes included in the database have been reviewed by nutrition professionals at the SNAP-Ed Connection using specific cost and nutrition criteria. Recipes are consistent with the current Dietary Guidelines for Americans and MyPlate. All recipes include the nutritional and cost analysis.  Cookbooks:   * Fast and Easy Recipes * Healthy Recipes * More Great Recipes!   These cookbooks and more are also available in the Resource section of the Lifetime Nutrition and Wellness home page.  Display protein food replicas (if available) or protein food images from magazines at a table in front of the room. Encourage students to discuss protein foods and how they add protein to their daily diet.  Ask students to recall the protein foods they have eaten in the last three days.  Allow them to add the foods to the Food Tracker section of the SuperTracker. They will be able to view how their daily choices stack up to their food group targets and daily limits.  Or, have students list the foods on a sheet of paper if computers are not available.  With your computer connected to a multimedia projector, log into the SuperTracker website.<https://www.supertracker.usda.gov/>  Type in some of their choices to evaluate the amount, daily calorie limit and daily food group targets. Discuss the results. |
| **Direct Instruction with Special Education Modifications/**  **Accommodations** | Introduce lesson objectives, terms, and definitions.  Distribute handouts Eat Seafood Twice a Week – 10 Tips to Help You Eat More Seafood and With Protein Foods, Variety is Key – 10 Tips for Choosing Protein from the 10 Tips Nutrition Education Series. Allow students to review the tips to encourage eating more protein. These handouts may be included in their personal Lifetime Nutrition and Wellness Cookbook.  Distribute handout Healthy Eating for Vegetarians – 10 Tip for Vegetarians and discuss the healthy eating options for people choosing not to eat meat, poultry, or fish.  Connect your computer to a multimedia projector to view each page of the ChooseMyPlate website.  ChooseMyPlate – Protein Foods<http://www.choosemyplate.gov/food-groups/protein-foods.html>  Distribute graphic organizer ChooseMyPlate – Protein Foods so that students may take notes.  Review and discuss each page with your students so they become familiar with the nutrients, health benefits and needed amounts. Be prepared to do an image search of protein foods students are not familiar with.  Protein Foods – Go Lean with Protein   * What’s in the Protein Foods Group? (view food gallery) * How Much is Needed? * What Counts as an Ounce? * Nutrients and Health Implications * Tips for Making Wise Choices * Vegetarian Choices   *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * check for understanding * encourage participation |
| **Guided Practice with Special Education Modifications/**  **Accommodations** | Introduce PowerPoint Trace Minerals. Allow students to take notes on their own paper (typed or handwritten) as you review the functions and sources of the minerals as well as deficiencies and excesses or use the graphic organizer Trace Minerals. Students may include these notes in their cookbook also.  Divide students into lab groups so that they may plan for the protein lab. They may choose their own recipe or review one provided by you. They will compile a grocery list of needed items.  Distribute handout Substitutions and Healthier Cooking and Baking. Students may use this handout to substitute healthier ingredients for higher calorie items.  Remind students of safety procedures, appropriate dress and personal hygiene in food preparation.  Distribute the Rubric for Laboratory Experience – Protein Foods so students will understand what is expected.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * peer to take notes * printed copy of slide presentation |
| **Independent Practice/Laboratory Experience with Special Education Modifications/**  **Accommodations** | Groups will set their tables according to the recipe chosen and practice etiquette and table service.  Students will prepare a protein foods recipe following all safety guidelines in the allotted amount of time.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * extending time for assignments * checking for understanding |
| **Lesson Closure** | Review lesson objectives, terms, and definitions.  Question and Answer Review  Ask the students to recall learned information from the following questions:   * Which mineral makes hemoglobin that carries oxygen to all body cells? * Which mineral helps wounds heal? * Which mineral helps prevent tooth decay and strengthen bones? * Which mineral deficiency produces anemia? * What happens if I get too much iodine? * What can happen if I don’t get enough copper? zinc? selenium?   Students may refer to their notes for review. |
| **Summative/End of Lesson Assessment with Special Education Modifications/**  **Accommodations** | Students will be assessed with an appropriate rubric.  Students will also have the opportunity to evaluate the protein foods lab for flavor, ease of preparation and presentation.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * encouraging participation * assisting in lab procedures |
| **References/Resources** | **Images:**   * Microsoft Office Clip Art: Used with permission from Microsoft.   **Textbook:**   * Duyff, R. L. (2010). *Food, nutrition & wellness.* Columbus, OH: Glencoe/McGraw-Hill. * Kowtaluk, H. (2010). *Food for today.* Columbus, OH: Glencoe/McGraw-Hill. * Weixel, S., & Wempen, F. (2010). *Food & nutrition and you.* Upper Saddle River, NJ: Pearson/Prentice Hall.   **Website:**   * Beefnutrition.org The beef farmers and ranchers have a long-standing commitment to nutrition education and science-based communications about beef, including the substantial body of evidence that demonstrates protein’s role in maintaining a healthy weight, building muscle, and fueling physical activity.<http://www.beefnutrition.org/> * U.S. Department of Agriculture.  ChooseMyPlate.gov Website. Washington, DC. Protein Foods.<http://www.choosemyplate.gov/food-groups/protein-foods.html> Accessed December, 2012. * U.S. Department of Agriculture.  ChooseMyPlate.gov Website. Washington, DC. SuperTracker.<https://www.supertracker.usda.gov/> Accessed December, 2012. |
| **Additional Required Components** | |
| **English Language Proficiency Standards (ELPS) Strategies** | * Word wall * Draw visual representations of terms on word wall * Add terms and definitions to personal dictionary * Utilized Four Corners Vocabulary/ Word Wall Activity |
| **College and Career Readiness Connection[[1]](#footnote-1)** |  |
| **Recommended Strategies** | |
| **Reading Strategies** | Encourage your students to read more information about the benefits of protein foods with the following handouts:   * Get Lean with Protein * High-quality protein promotes optimal health * Surprising Facts about Lean Beef * Harvard School of Public Health What Should I Eat? Protein.<http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/protein/>   Encourage students to “visualize” as they read. Many students are visual learners and will benefit from making sketches or diagrams on scrap paper as they read. Providing students with graphic organizers to help them organize their thoughts is also helpful. |
| **Quotes** | I make lots of casseroles that have protein, veggies, carbs, and good fats altogether.  **-Tori Spelling**  You have to be cautious of eating continuously the same thing. Beef comes to mind right away, and there’s nothing wrong with beef, but you’ve got to do whatever you’re doing in moderation. So, try to break it up a little bit. Eat some fish or some shellfish at least a couple of times a week. **-Emeril Lagasse**  I love lean meats like chicken, turkey. I’m obsessed with sushi and fish in general. I eat a lot of veggies and hummus. **-Shawn Johnson**  We’ll be going to the fish market and a farmer’s market this afternoon to get what we need to make and eat dinner as a family. I’m trying to expose my kids to going to a farmer’s market or the fish market and learning what that’s all about.  **-Emeril Lagasse** |
| **Writing Strategies** | **Journal Entries:**   * My favorite protein is \_\_\_\_\_\_\_ because ………. * My favorite protein recipe is \_\_\_\_\_\_\_ because ……… * I think being a vegetarian is ……. * I stick to low fat proteins so that ….   **Writing Strategies:**  RAFT Writing Strategy   * + Role – teenager   + Audience – parent   + Format – note   + Topic – wanting to be a vegetarian |
| **Communication 90 Second Speech Topics** | Three benefits of eating beef are …….  Two reasons to eat fish twice a week are …. |
| **Other Essential Lesson Components** | |
| **Enrichment activity** | If budget allows:   * Allow to students to make a meatless meal using beans and peas * Allow students to make hard cooked eggs and discuss the benefits * Allow students to make peanut butter sandwiches and share with classmates   Lifetime Nutrition and Wellness Math Assessment Problems:  Question 1. Margaret has been tracking what she eats. She has written down the total caloric intake for the past week.  Monday: 2,045, Tuesday: 3,209, Wednesday: 1,098, Thursday: 2,398, Friday: 3,487, Saturday: 2,378, Sunday: 2,938  What is Margaret’s approximate mean caloric intake? a. 2,225  b. 2,500 c. 2,750 d. 3,000  Answer: b  Question 4. You are shopping for a meal that calls for 2 pounds of meat at $2.39 per pound, one onion at 77 cents, and one pound of pasta that costs $1.48. Approximately how much would it cost if you needed to triple the amounts of all ingredients?  a. $ 4.64  b. $ 7.03 c. $14.06 d. $21.09  Answer: d  Lifetime Nutrition and Wellness Social Studies Assessment Questions  Food began to be processed and packaged during the: a. Great Depression  b. Roaring Twenties c. Industrial revolution d. World War I  Answer: c  Lifetime Nutrition and Wellness Writing Prompt:  Think about safe and sanitary practices in the use, care, and storage of food. Imagine that you have friend who does not follow these practices. Write an essay explaining safe and sanitary practices in the use, care, and storage of food. (9th and 10th grade expository writing) |
| **Family/Community Connection** | Invite the Agriculture teacher at your school to speak to the class about the cuts of beef and the best way to cook them. |
| **CTSO connection** | **Family, Career, and Community Leaders of America**  <http://www.texasfccla.org>  **Family, Career, and Community Leaders of America**  <http://www.texasfccla.org>  **STAR Events:**   * Sports Nutrition  An individual or team event, recognizes participants who use Family and Consumer Sciences skills to plan and develop an individualized nutritional plan to meet the needs of a competitive student athletic in a specific sport. * Nutrition and Wellness An individual event, recognizes participants who track food intake and physical activity for themselves, their family, or a community group and determine goals and strategies for improving their overall health.   Online **STAR Events:**   * No Kid Hungry National Outreach Project  A team event, recognizes chapters that participate in the “No Kid Hungry” Share our Strength National Outreach Project. Participants will use Family and Consumer Sciences content and skills to address ending childhood hunger through service learning, education/awareness, and fundraising. |
| **Service Learning Projects** | * Successful service learning project ideas originate from student concerns and needs. Allow students to brainstorm about service projects pertaining to lesson. For additional information on service learning see: <http://ysa.org/> * Example: Students may make peanut butter sandwiches to help feed the hungry in their community and educate them about the benefits of protein. |

1. Visit the Texas College and Career Readiness Standards at <http://www.thecb.state.tx.us/collegereadiness/CRS.pdf>, Texas Higher Education Coordinating Board (THECB), 2009. [↑](#footnote-ref-1)