**TEXAS CTE LESSON PLAN**

[www.txcte.org](http://www.txcte.org)

|  |  |
| --- | --- |
| **Lesson Identification and TEKS Addressed** | |
| **Cluster** | Human Services |
| **Course** | Lifetime Nutrition and Wellness |
| **Lesson/Unit Title** | ChooseMyPlate – Dairy, Major Minerals and Electrolytes |
| **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  (6) The student demonstrates knowledge of food management principles.  (C) The student is expected to demonstrate correct food preparation techniques, including nutrient retention  (D) The student is expected to use food buying strategies such as calculating food costs, planning food budgets, and creating grocery lists  (7) The student demonstrates effective work habits.  (C) The student is expected to practice problem-solving using leadership and teamwork skills |
| **Basic Direct Teach Lesson** | |
| **Instructional Objectives** | **Students will:**   * Focus on dairy foods and their health benefits * Analyze major minerals for their functions and food sources * Determine the effects of major minerals * Plan and prepare a dairy recipe |
| **Rationale** | Consuming dairy products provides health benefits, especially improved bone health. Foods in the Dairy Group provide nutrients that are vital for health and maintenance of your body. These nutrients include calcium, potassium, vitamin D, and protein. |
| **Duration of Lesson** | Four 45-minute class periods |
| **Word Wall** | **Electrolyte Minerals:** A mineral that helps form particles called electrolytes, which help cells function  **Functions:** To serve a purpose  **Hypertension:** High blood pressure; linked to high salt intake  **Major Minerals:** A mineral that you need in the amount of 100 mg or more a day  **Nutrients:** A chemical substance, such as protein, carbohydrates, fat, or fiber, that your body needs to function, grow, repair itself, and create energy  **Sources:** The place, person, or thing through which something has come into being or from which it has been obtained |
| **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:**   * Dairy food replicas (if available) * Magazine pictures of dairy foods   **Supplies:**   * Replica of MyPlate (if available) * Copies for handouts   **PowerPoint:**   * Major Minerals and Electrolytes * Presentation Notes – Major Minerals and Electrolytes   **Technology:**   * Free iPad Apps   + A-Z Food Nutrition Facts lite – Vitamins and Minerals from groceries for example, fruits, vegetables, seafood, meat, poultry, legumes, salads, fats, nuts, dairy, herbs and more. This extensive app provides detailed information on everything you need to know about close to a thousand different foods.<https://itunes.apple.com/us/app/z-food-nutrition-facts-lite/id484101503?mt=8>   **Graphic Organizers:**   * ChooseMyPlate – Dairy * ChooseMyPlate – Dairy (Key) * Major Minerals and Electrolytes * Major Minerals and Electrolytes (Key)   **Handouts:**   * Got Your Dairy Today * Myplate Dairy * Rubric for Laboratory Experience – Dairy Foods * Salt and Sodium * Substitutions for Healthier Cooking and Baking   **Cookbooks:**   * Beverage 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 fifth 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 – Protein Foods and Trace Minerals * 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:   * Beverage 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 dairy food replicas (if available) or dairy food images from magazines at a table in front of the room. Encourage students to discuss dairy foods and how they add dairy to their daily diet.  Ask students to recall any dairy 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, if computers are not available, have students list the foods on a sheet of paper.  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 Got Your Dairy Today? 10 Tips to Help You Eat and Drink More Fat-Free or Low-Fat Dairy Foods and Salt and Sodium – 10 Tips to Help You Cut Back from the 10 Tips Nutrition Education Series. Allow students to review the tips to encourage eating more dairy. These handouts may be included in their personal Lifetime Nutrition and Wellness Cookbook.  Connect your computer to a multimedia projector to view each page of the ChooseMyPlate website.  ChooseMyPlate – Dairy<http://www.choosemyplate.gov/food-groups/dairy.html>  Distribute graphic organizer ChooseMyPlate – Dairy 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 dairy products students are not familiar with.  Dairy – Get your calcium-rich foods   * What’s in the Dairy Group? View Food Gallery * How Much is Needed? * What Counts as a Cup? * Health Benefits and Nutrients * Tips for Making Wise Choices   Visit the ‘Got Milk’ website to learn more about the milk.   * Got Milk? Promotes the consumption of milk<http://www.gotmilk.com/>   + 1-855-milk-zzz   + TV Commercials   + Health Benefits   + Recipes   + News and Events   *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * checking for understanding * encourage participation |
| **Guided Practice with**  **Special Education Modifications/**  **Accommodations** | Introduce PowerPoint Major Minerals and Electrolytes. Allow students to take notes on their own paper (typed or handwritten) as you review the functions and sources of the vitamins as well as deficiencies and excesses or use the graphic organizer Major Minerals and Electrolytes. Students may include these notes in their cookbook also.  Divide students into lab groups so that they may plan for the dairy 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 items for high calorie ingredients.  Divide students into lab groups. Remind students of safety procedures, appropriate dress and personal hygiene in food preparation.  Distribute the Rubric for Laboratory Experience – Dairy 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** | Students will prepare a dairy food recipe following all safety guidelines in the allotted amount of time.  Groups will set their tables according to the recipe chosen and practice etiquette and table service.  *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 helps regulate blood pressure? * Which mineral keeps bones strong? * Which mineral helps regulate body temperature? * Which mineral deficiency causes osteoporosis? * What happens if I get too much sodium? * What can happen if I don’t get enough calcium? magnesium? potassium?   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 evaluate the dairy 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** | **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:**   * Got Milk? Promotes the consumption of milk<http://www.gotmilk.com/> * U.S. Department of Agriculture.  ChooseMyPlate.gov Website. Washington, DC. Dairy.<http://www.choosemyplate.gov/food-groups/dairy.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 dairy at:   * The National Dairy Council  The Dairy Report Blog<http://www.nationaldairycouncil.org/Pages/Home.aspx> * Six Health Benefits from Drinking Milk <http://www.supercow.com/blog/bid/257718/6-Health-Benefits-From-Drinking-Milk>   Encourage students to connect reading to their life experiences or prior knowledge. |
| **Quotes** | Think what a better world it would be if we all, the whole world, had cookies and milk about three o’clock every afternoon and then lay down on our blankets for a nap. **-Barbara Jordan**  I love milk so much! I make a point of drinking a glass of milk every day. So now anyone who did those milk ads with the milk mustaches, they’re my heroes. **-Natalie Portman**  They told me I gave the best milk mustache of anybody. **-Yasmine Bleeth**  Never be a food snob. Learn from everyone you meet – the fish guy at your market, the lady at the local diner, farmers, cheese makers. Ask questions, try everything, and eat up! **-Rachael Ray** |
| **Writing Strategies** | **Journal Entries:**   * My favorite dairy food is \_\_\_\_\_\_\_ because ………. * My favorite dairy food recipe is \_\_\_\_\_\_\_ because ……… * I like milk because …. * My favorite cheese is \_\_\_\_\_\_\_ because ….   **Writing Strategies:**  RAFT Writing Strategy   * + Role – teacher   + Audience – dairy farmer   + Format – letter   + Topic – field trip for students to visit the milking of a cow |
| **Communication 90 Second Speech Topics** | * Three benefits of eating dairy foods daily are ……. * Three tips to eat more dairy foods are …… |
| **Other Essential Lesson Components** | |
| **Enrichment activity** | Milk Mustache  Allow students to make a milk mustache using three parts ice cream to one-part milk. Take digital celebrity photos to post on a bulletin board with the “Got Milk?” slogan.  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:  Question: 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 a local dairy farmer or a cheese maker to speak to the class on how they process the milk or cheese. |
| **CTSO connection** | **Family, Career, and Community Leaders of America**  <http://www.texasfccla.org>   * 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 work with the school personnel to encourage students to drink the milk with their school breakfast and lunches so as not to waste the milk by throwing it away. |

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)