**TEXAS CTE LESSON PLAN**

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| **Lesson Identification and TEKS Addressed** | |
| **Cluster** | Hospitality and Tourism |
| **Course** | Culinary Arts |
| **Lesson/Unit Title** | Foundations of Safe Food: Purchasing, Receiving and Storage |
| **TEKS Student Expectations** | **130.254. (c) Knowledge and Skills**  (2) The student applies advanced reading, writing,  mathematics, and science skills for the food service  industry.  (A) The student is expected to compose industry appropriate documents such as purchasing specifications and purchase orders.  (B) The student is expected to compose industry appropriate documents.  (9) The student understands the various food service operations such as quick service, fast casual, casual, fine dining, institutional, and beverage service.  (D)The student is expected to determine proper receiving, storage, and distribution techniques. |
| **Basic Direct Teach Lesson** | |
| **Instructional Objectives** | **Students will:**   * Determine the importance of purchasing, receiving, and storage in providing safe food * Identify responsible purchasing specifications and be familiar with purchase orders * Determine, identify and demonstrate safe and proper receiving, storage and distribution techniques |
| **Rationale** | Providing safe food in a restaurant begins well before you ever break out the knife and cutting board. Safe food starts with proper purchasing, receiving and storage procedures. These procedures must also accompany well established guidelines, standards and product specifications to ensure safe, high quality food is delivered to every guest in every food service setting. |
| **Duration of Lesson** | Three 45-minute class periods |
| **Word Wall** | **Flow of food:** The sequence of steps needed to transform raw materials and ingredients into manufactured food products  **Purchasing:** The steps and procedures necessary to procure food products needed to create and prepare food items in the foodservice setting; includes writing purchase orders, establishing product specifications and working with vendors to place orders  **Purchase order:** A document asking a supplier to ship food or supplies at a predetermined price  **Receiving:** The steps and procedures that follow purchasing whereby a foodservice employee accepts deliveries from vendors upon physical delivery; includes verifying orders, checking orders and taking possession of products in an efficient and safe manner  **Storage:** The steps and procedures that follow receiving whereby a foodservice employee delivers accepted deliveries of food to proper storage areas in a timely manner to ensure a continued commitment to food safety while keeping within safe time and temperature considerations; includes rotation of products, proper labeling and proper placement in the storage area  **TCS (Temperature Controlled for Safety) Foods:** Any food that requires time-temperature control to prevent the growth of microorganisms and the production of toxins; this food contains moisture and protein and has a neutral or slightly acidic pH  **Temperature danger zone:** The range of temperatures conducive to bacterial growth; includes temperatures between 41°F and 135°F  **Time temperature abuse:** Allowing temperature control for safety (TCS) foods to remain in the temperature danger zone for extended periods of time  **Vendors:** Companies who sell products to the foodservice industry |
| **Materials/**  **Specialized Equipment Needed** | **Equipment:**   * Computer with projector for PowerPoint presentation * Computers with Internet access (be sure to follow district guidelines) * Light projector (Elmo)   Optional:   * Dry goods area (pantry) * Refrigeration unit (walk-in, commercial reach in or standard refrigeration)   **Materials:**   * Cardstock * Post-It® notes   **Supplies:**   * Food service thermometers * Groceries (various foods) * Copies of handouts   **PowerPoint:**   * Foundations for Safe Food: Purchasing, Receiving and Storage   **Technology:**   * Free iPad App:   + USDA Food Safety USDA provides an important role as U. S. Government’s Agency for food, agriculture, natural resources, and related issues.  [https://itunes.apple.com/us/app/usdafoodsafety/id457796600?mt=8](http://skillsusa.org/?mt=8)   **Graphic Organizers:**   * Refrigerator Storage * Refrigerator Storage (Key) * Steps to Providing Safe Food * Steps to Providing Safe Food (Key)   **Handouts:**   * Keep It Cool – Refrigerator Storage Chart * Purchase Order * Receiving and Storage of Food * Refrigerator Safety Inspection * Rubric for Receiving and Storage of Food Flyer * Storing Fruits and Vegetables |
| **Anticipatory Set** | **Before class begins:**  Before the start of this lesson, secure a list of food items and prices from a local vendor or the school cafeteria supervisor to be able to complete a purchase order in the Guided Practice section.  This lesson can help students understand that safe food is a responsibility for all those involved in the process of providing food to customers. This activity will force your students to think about all the potential hazards that food faces from the time it is sitting on the shelf in your vendors warehouse to the time that it hits the table in front of the guest.  On the white board in the classroom, draw a large, rounded rectangle to indicate a refrigerator. Next to it, draw a large rectangle to indicate a pantry. Draw shelves (lines) on both.  As students enter the classroom, hand each one of them a Post-It®note. Instruct students to write an edible food item on the note. They are then to place the note on a shelf in either the refrigerator (rounded rectangle) or the pantry (rectangle).  Leave the notes on the board and continue with the lesson. Corrections will be made in the Lesson Closure section.  Ask students the following questions about purchasing, receiving and storage:   * What do you think the term “reputable vendor” means? * Who benefits from a restaurant making a commitment to providing safe food? * What costs can be associated with providing unsafe food? * How do you store food at home?   Continue the discussion about providing safe food to the public. |
| **Direct Instruction with Special Education Modifications/**  **Accommodations** | Introduce lesson objectives, terms, and definitions.  Distribute graphic organizer Steps to Providing Safe Food so that students may take notes during slide presentation.  Introduce PowerPoint Foundations of Safe Food: Purchasing, Receiving and Storage and lead a discussion about providing safe food in the industry.  View YouTube videos:  Purchasing: The following video is a look into Food’s Quality Assurance System. This is an example of some of the information you would need to look for when seeking reputable suppliers.   * Quality Assurance Insuring food safety is one of the most critical challenges facing the food industry today. <http://www.youtube.com/watch?v=XXlUfaz7sQI>   Receiving: The following is a video that covers some important topics that must be considered when inspecting and receiving deliveries.   * Receiving Food Deliveries To maintain the highest quality food product, a facility must properly inspect the food before receiving.<http://www.youtube.com/watch?v=gEGyhKPIdXw>   *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 * providing a copy of the slide presentation notes |
| **Guided Practice with Special Education Modifications/**  **Accommodations** | Distribute the list of the food items and prices you have secured from a vendor or the school cafeteria supervisor.  Divide the class into subgroups of three or four students.  Distribute the handout Purchase Order and instruct the groups to order the food items needed for the scenario below:  The Culinary Arts program on your campus runs a bistro for faculty and staff once a month. This month you will be serving an Italian lunch of lasagna and Caesar salad. A purchase order for the ingredients will need to be made.  Allow time for groups to complete the purchase order.  You may display an example of the purchase order on a light projector to guide the students.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * peer tutor * monitor progress * oral responses |
| **Independent Practice/Laboratory Experience with Special Education Modifications/**  **Accommodations** | **Before class:** Print the Receiving and Storage of Food attachment on cardstock. Cut and separate the cards and place them in a basket. Blank cards are available to add more foods.  Divide the class into subgroups of three.  Allow a member of each group to draw a card from the basket.  Students will research the correct receiving and storage information for their selected food and create a flyer using Microsoft Word™ templates.  Students may use their textbooks or the following websites for their research:   * <http://www.centerforfoodsafety.org/> * <http://www.fda.gov/Food/default.htm> * <http://www.fightbac.org/> * <http://www.foodsafety.gov/>   Distribute Rubric for Receiving and Storage Flyer so that students may 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:*   * computer assistance * peer tutor * reduced assignment |
| **Lesson Closure** | Review terms, definitions and objectives.  Review the Post-It® notes on the whiteboard refrigerator and pantry.  Check to see if the notes with the food items were placed on the correct shelf. Allow the students to make corrections.  Place the graphic organizer Refrigerator Storage on the light projector. Select different students to write in a food item on the correct shelf. Have the rest of the class check to make sure the answers are correct.  Debrief with your students by asking the following questions and allowing them time to answer:   * What is the difference between storing food at home and storing food in a commercial setting? * Why has food become such an important part of our industry and considering that, why is purchasing, receiving and storage so important? * What obstacles do restaurants face when it comes to following receiving and storage guidelines? * What is the value of this lesson to you as an aspiring culinary professional? |
| **Summative/**  **End of Lesson Assessment**  **with Special Education Modifications/Accommodations** | Students will present their flyers to the class.  Students will be assessed with appropriate rubric. **Option:** The best way to assess student’s mastery of receiving and storage techniques is to have them demonstrate proper procedures for receiving and storing foods.  Obtain food samples (fake, real, or images of food) to have students “receive and store” in a role play scenario.  Make sure to advise students that since even one mistake in these areas can compromise the safety of the food later during preparation, it is best to be safe from the onset.  Allow them to practice in groups before completing this role play to get some of the role play jitters out of the way before testing for mastery.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * encourage participation * give much encouragement and praise |
| **References/**  **Resources** | **Textbooks:**   * *Culinary essentials.* (2010). Woodland Hills, CA: Glencoe/McGraw Hill. * *ServSafe manager: Updated with the 2013 FDA Food Code.* (2014). Chicago, IL: National Restaurant Association.   **YouTube:**   * Quality Assurance Insuring food safety is one of the most critical challenges facing the food industry today. [http://www.youtube.com/watch?v=XXlUfaz7sQI](http://www.texasfccla.org?v=XXlUfaz7sQI) |
| **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 |
| **College and Career Readiness Connection[[1]](#footnote-2)** |  |
| **Recommended Strategies** | |
| **Reading Strategies** | Other articles pertaining to this lesson students may read include:   * How to Choose a Reputable Ingredient Supplier Choosing a reputable ingredient supplier is no small task. The safety and quality of the final food product is ultimately dependent on not only the ingredients themselves but also on the best practices of the supplier. Sourcing ingredients, therefore, is a multi-step course. <http://www.foodsafetymagazine.com/magazine-archive1/junejuly-2009/how-to-choose-a-reputable-ingredient-supplier/> * Receiving Procedures in the Restaurant  Receiving food and supplies from your vendors requires more than simply taking boxes off a delivery truck. Restaurant owners and managers should have procedures in place for any employee who handles deliveries.<https://www.foodservicewarehouse.com/education/restaurant-management-and-operations/receiving-procedures-in-the-restaurant/c28031.aspx>   Reading strategy:  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** | Businesses must evolve over time, and as more information on food safety becomes available to the public, those that pro-act to new advances are going to be in a better position.  **-Roger Berkowitz, President and CEO, Legal Sea Foods**  Food safety involves everybody in the food chain.  **-Mike Johanns, US Senator**  Stated in the simplest terms, the recognized solution to the problem of foodborne illness is a comprehensive prevention strategy that involves all participants in the food system, domestic and foreign, doing their part to minimize the likelihood of harmful contamination. And that is the strategy mandated by FSMA. It is not a strategy that assumes we can achieve a zero-risk food supply, but it is a strategy grounded in the conviction that we can better protect consumers and the economic vigor of the food system if everyone involved implements reasonably available measures to reduce risk  **- Michael R. Taylor, FDA’s Deputy Commissioner for Foods** |
| **Writing Strategies** | **Journal Entries:**   * Providing safe food for everyone is important because … * Cross-contamination can occur in … * Training staff to receive purchases is vital because …   **Writing Strategy:**  RAFT writing strategy is designed to demonstrate student understanding of material in a creative and relevant way.   * + Role – restaurant owner   + Audience – employees   + Format – bulletin   + Topic – safe receiving and storage guidelines   The bulletin will highlight the importance of proper procedures in simple steps to comply to company guidelines. |
| **Communication 90 Second Speech Topics** | * Three things that a purchase order will do for the foodservice establishment is … * Three safe practices when it comes to dry goods storage are … |
| **Other Essential Lesson Components** | |
| **Enrichment Activity** | Challenge students to visit a local restaurant and make notes or take pictures of effective and safe storage practices that they observe (be sure to ask permission first).  This would serve as an excellent lesson in professional communication and networking.  Students can bring this information back to class and work together to create storage guidelines for the storage areas in your facility.  The best way for students to learn proper procedures for storage is to have them see, feel and touch these products and navigate multiple scenarios in practice.  Practice makes perfect.  If you spend the time with your students having them practice safe purchasing, receiving and storage procedures, then when it matters, they will make the proper decisions that will result in safe food. |
| **Family/**  **Community Connection** | Take a “before” picture of your refrigerator at home. Make note of the storage location of your family’s food items.  Now using elements of proper food storage you’ve learned in this unit, clean, organize and arrange your family’s refrigeration and storage at home so that it would pass inspection by the local health department.  Educate your family on preventing cross-contamination during food storage and the importance of proper storage techniques.  Distribute handouts Keep It Cool – Refrigerator Storage Chart, Refrigerator Safety Inspection and Storing Fruits and Veggies to assist in this assignment. |
| **CTSO Connection** | **Family, Career, and Community Leaders of America (FCCLA)**  [http://www.texasfccla.org](http://cte.sfasu.edu/wp-content/uploads/2014/11/Refrigerator-Storage.pdf)  Culinary Arts A team event – recognizes participants enrolled in occupational culinary arts/food service training programs for their ability to work as members of a team to produce a quality meal using industrial culinary arts/food service techniques and equipment.  **SkillsUSA**  [http://skillsusa.org/](http://cte.sfasu.edu/wp-content/uploads/2014/11/Storing-Fruits-and-Veggies.pdf)  Culinary Arts The competition will encompass both hot and cold food preparation and presentation. Contestants will demonstrate their knowledge and skills through the production of a four-course menu in a full day competition. The contestants will be rated on their organization, knife skills, cooking techniques, creative presentation, sanitation food safety techniques and above all, the quality and flavor of their prepared items. The high school competitors will work from one menu with standardized recipes. The college/postsecondary students will work from a market basket format and write their own menu and recipes the night before the competition. |
| **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://www.ysa.org](http://www.foodsafetymagazine.com/magazine-archive1/junejuly-2009/how-to-choose-a-reputable-ingredient-supplier/)  Example:  Volunteer at the local homeless shelter to help sort and properly store food deliveries and/or current inventory. |

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-2)