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| **TEXAS CTE LESSON PLAN**  [www.txcte.org](http://www.txcte.org) | |
| **Lesson Identification and TEKS Addressed** | |
| **Career Cluster** | Hospitality and Tourism |
| **Course Name** | Principles of Hospitality and Tourism |
| **Lesson/Unit Title** | Food Safety and Sanitation Guidelines - Culinary Arts |
| **TEKS Student Expectations** | 130.252. (c)  (8) The student explains how resources (employees, guests, and property) are managed to minimize losses or liabilities in the hospitality and tourism industry. The student is expected to:  (C) understand and demonstrate procedures for cleaning, sanitizing, and storing equipment and tools |
| **Basic Direct Teach Lesson**  (Includes Special Education Modifications/Accommodations and  one English Language Proficiency Standards (ELPS) Strategy) | |
| **Instructional Objectives** | **Students will:**   * Practice correct hand washing steps * Recognize ways to prevent common kitchen accidents * Observe how to use a fire extinguisher * Outline food borne illness and the causes * Clarify how proper food handling practices can prevent food borne illness * Analyze the difference between cleaning and sanitizing |
| **Rationale** | This course is preparing you to be “job ready;” therefore, we will be learning and following industry standards/food service regulations. Safety and sanitation are of ultimate importance. This lesson will provide you with knowledge and skills that will allow you to keep your customers, colleagues, family, and yourself safe and free from food borne illness. |
| **Duration of Lesson** | Five 45-minute class periods |
| **Word Wall/Key Vocabulary**  *(ELPS c1a, c, f; c2b; c3a, b, d; c4c; c5b) PDAS II (5)* | **Accidents:** An undesirable or unfortunate happening that occurs unintentionally and usually results in harm, injury, damage, or loss; casualty; mishap  **Bacteria:** Harmful microorganisms associated with food borne illness. Carried by people, animals, insects, and objects  **Contaminated Food:** Food that contains harmful microbes  **Cross-contamination:** Letting microorganisms from one food to get into another  **Danger zone:** The range of temperatures at which most bacteria multiply rapidly—between 40° and 140° Fahrenheit  **Fire extinguisher** A portable container, usually filled with special chemicals for putting out a fire  **Food safety:** following practices that help prevent food borne illness and keep food safe to eat  **Food borne illness:** Sickness caused by eating contaminated food, sometimes called food poisoning  **Perishable foods:** Foods that can become unsafe or spoil quickly if not refrigerated or frozen  **Sanitation:** Keeping work areas from dirt or bacteria |
| **Materials/Specialized Equipment Needed** | **Equipment:**   * Computer with Internet for multimedia presentations * Computers with Internet access (be sure to follow district guidelines) * Light projector (Elmo)   **Materials:**   * Food Employees * Safe Foods Temperature Poster * Texas Food Establishments Rules: Field Inspection Manual * Three Compartment Sink   Note: Make only one copy of each of these materials from the Texas Department of State Health Services to use for reference.  **Supplies:**   * Aprons * Baking soda * Bobby pins * Chef jacket * Chef pants * Dish cloth * Dish towel * Exit escape route * Fingernail polish remover * Fire extinguisher * Food manager’s certificate (teacher copy) * GloGerm® (optional) * Hair restraints * Oven mitt/pot holder * Paper towels * Sanitizing pails * Soap * Spray bottles (6) labeled sanitizer   **Note to teacher:** If you are ServSafe® certified – consider going to your local city or county health department to find the requirements needed to be able to issue a local food handler’s certification to your students. This certification is required in most jurisdictions for anyone who serves food. This could be a daycare worker, nursing home attendant, adult day assistant, and of course, any food service establishment employee. Students may also use this certification to volunteer at their church fundraisers or community events. This may allow your students to be employed in their first job after successfully completing your course.  This lesson could also be used to reinforce lessons in the ServSafe® Managers Course.   * copies of all handouts   **PowerPoint:**   * Culinary Arts Safety Award * Food Safety and Sanitation Guidelines – Culinary Arts * Presentation Notes – Food Safety and Sanitation Guidelines – Culinary Arts   **Technology:**   * Free iPad App:   + Agrilife Food Safety<https://itunes.apple.com/us/app/agrilife-food-safety/id445935229?mt=8>   **Graphic Organizers:**   * Least Wanted Food borne Pathogens * Safety Hazards   **Handouts**   * 2009 FDA Food Code * Fire Extinguisher Use * Fire Extinguisher Use (Key) * Food borne Illness Research * Food Employees * Inspection Report 2006 * Rubric for Food borne Illness GlogsterEDU® Poster * Rubric for Food borne Illness Poster * Safe Food Temperature Poster * Texas Food Establishment Rules * TFER Hand Wash Poster * Three Compartment Sink |
| **Anticipatory Set**  (May include pre-assessment for prior knowledge) | **Before class begins:**  Display as many of the lesson related supplies (see Materials or Specialized Equipment Needed) that you have available, on a table in front of the room:  Display your Food Manager’s Certification as well for students to see.  Begin the class with the following questions and have students share their responses:   * Has anyone ever had an accident in the kitchen? * A fire? Cut? Slip or fall? * Has anyone ever had food poisoning? * Nausea? Upset stomach? * How did you feel?   Allow time for students to describe the accidents they have had or have seen.  These are the reasons that safety in the kitchen is of utmost importance. |
| **Direct Instruction \*** | Introduce lesson objectives, terms, and definitions.  It is extremely important that students are taught safety before allowed in the cooking lab/kitchen area. Many school districts provide safety awareness guidelines that students and parents are required to sign. Be sure to follow your districts guidelines.  The PowerPoint Food Safety and Sanitation Guidelines – Culinary Arts is divided into three sections:   * Personal Hygiene * Commercial Kitchen Safety * Food Safety   You may choose to cover each section separately.  **Personal Hygiene:**  Announce to students that this lesson will reinforce the ServSafe® Food Manager’s curriculum or any state recognized Food Manager’s certifications.  Discuss appropriate attire for your classroom labs. They may be different from those listed on the slide presentation.  Distribute handout TFER Hand Wash Poster from the Texas Department of State Health Services. Allow students to practice this procedure and time each other for accuracy.  Since this is a teaching lab, it is important to follow industry standards/ food establishment rules as closely as possible. Your job is to assist your students in becoming “job ready.”  **Commercial Kitchen Safety:**  Your number one priority is SAFETY.  Continue with slide presentation Food Safety and Sanitation Guidelines – Culinary Arts.  View short videos and discuss your classroom safety procedures with your students.   * How to Safely Clean Spills in the Kitchen<http://youtu.be/ItTmGSEF0UM> * Preventing Burns<http://youtu.be/5_1T0iLmOck>   Distribute graphic organizer Safety Hazards.  Divide class into subgroups of three and assign each group one of the hazards: burns and scalds, cuts, slips, and falls.  Allow students to brainstorm accidents that could occur in the commercial kitchen by following the SAFE acronym: See it, assess it, fix it, and Evaluate it. An example is provided.  Distribute handout Fire Extinguisher Use. Students may answer handout as they view the video.  Ask students if they have a fire extinguisher at home. By law, their college dorm or apartment must have a fire extinguisher within a few feet from the kitchen. They should know how to use it.  Explain the PASS acronym.  View video on how to use a fire extinguisher.<http://youtu.be/lUojO1HvC8c>  **Food Safety:**  Continue with slide presentation.  Distribute graphic organizer Least Wanted Food borne Pathogens. Allow students to identify the pathogens and the sources from <http://www.fightbac.org>  More information will be researched in the Independent Practice section.  *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 * copy of slide presentation provided * allow students to make illustrations instead of writing out information |
| **Guided Practice \*** | Using the Internet, allow students to access About.com – Culinary Arts to take an online quiz for five different difficulty levels:   * Dishwasher – four questions * Prep cook – six questions * Line cook – eight questions * Sous chef – ten questions * Executive chef – 12 questions   <http://culinaryarts.about.com/library/quizzes/foodsafety/blquiz.htm?>  This quiz may be used as a practice for a state or national food sanitation certification or other appropriate certifications.  Demonstrate the steps of how to use the fire extinguisher. Be careful not to press the handle, as some students may have allergies and the fumes and chemicals may be harmful to them.  Inquire with your school district’s safety officer for procedures to be able to demonstrate the fire extinguisher use outside, or inquire with the fire education officer at your fire department about speaking to your class about fire safety and proper fire extinguisher use.  Demonstrate how to properly wash your hands and then have students practice this on their own. Encourage them to sing the Happy Birthday song twice or sing the ABC song as they wash their hands.  If available, the GloGerm® kit may be used at this time to reinforce the importance of hand washing. Follow directions on the product.  Demonstrate the difference between cleaning and sanitizing. Have a student wipe off a counter top or table with a dry towel. Ask students if the area is clean enough for food prep? Why or why not? Demonstrate making a simple sanitizing solution.  **For Teachers only:** Sanitizing solution: Add 1 teaspoon regular household bleach to 1 quart (4 cups) of tap water in a large spray bottle. Sanitize counters, cutting boards, tables, utensils, etc. before and after use.  Solution can be made in a large container and then poured carefully into smaller spray bottles.  Note:   * Wear an apron and gloves when adding bleach to water as bleach can discolor clothes * Spray bottles must be labeled * Store out of children’s reach * Replace sanitizing solution often   Have a student wipe off a counter top or table with a towel that has been immersed in the sanitizing solution. Once again, ask students if the area is clean enough for food prep. Why or why not?  Read more:  How to Make a Bleach Sanitizing Solution eHow.com <http://www.ehow.com/how_6225300_prepare-chlorine-sanitizing-solution.html>  Stress the importance of sanitation and its connection to preventing many foods borne illnesses. Discuss which areas of the lab are expected to be sanitized and whose job it is to sanitize these areas. Stress sanitizing areas BEFORE and AFTER food prep, setting tables, etc.  *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*   * encourage participation * praise hands on activity |
| **Independent Practice/Laboratory Experience/Differentiated Activities \*** | Divide the class into subgroups of two or three. Students will work with partners to research the following information on food poisoning and answer the two questions:   * Sources * Symptoms * Treatment * Long term effects * Prevention   Distribute handout Food borne Illness Research. Allow students to choose a pathogen from the list to research. More may be added from other sources.  Access <http://www.fightbac.org> to demonstrate where to find the information needed. Explain to students that they will be presenting information to the rest of the class.  Distribute Rubric for Food borne Illness Poster and Rubric for Food borne Illness GlogsterEDU® Poster and review so students know 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:*   * extra time for assignments * reduce assignment |
| **Lesson Closure** | Review terms, definitions, and objectives.  Prior to class beginning: Prepare a large sanitizing solution and pour into labeled spray bottles.  Divide students into their lab teams. Provide each team with labeled SANITIZER spray bottles and instruct students to sanitize their kitchen/lab area.  Beach ball Question and Answer – Toss ball to students to review information learned.   * What can we put on a grease fire? * What is the acronym to remember to use the fire extinguisher? * How long can leave food out? * What are the hand washing steps in order? * Who is most at risk for food poisoning? * What jewelry is allowed during food prep? * What are the five hand washing steps? |
| **Summative/End of Lesson Assessment \*** | Students will present the information on the food borne pathogens.  Assess student presentations with a rubric.  Distribute certificate Culinary Arts Safety Award to students when they have successfully completed this lesson. Students should save the certificate to their portfolio.  *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/**  **Teacher Preparation** | **Images:**   * Culinary Arts, Harlingen High School South, Harlingen, Texas * Microsoft® Office Clip Art   **Textbooks:**   * *Culinary essentials. (2010).* Woodland Hills, CA: Glencoe/McGraw-Hill. * ServSafe® Manager. 6th. Chicago, IL: National Restaurant Association, 2012. Print. * ServSafe Starters Employee Guide®, 5th. Chicago, IL: National Restaurant Association, 2010. Print.   **Websites:**   * Fightbac.org Least Wanted Food borne Pathogens   http://www.fightbac.org/10-least-wanted-food borne-pathogens/   * Texas Department of State Health Services General Publicationshttp://www.dshs.texas.gov/foodestablishments/guidance.aspx   **YouTube:**   * General Kitchen Safety The commercial kitchen is a busy environment that is full of many potential dangers that are both obvious and, in some cases, less obvious to the untrained person. When working in this environment, one must be aware of these potential hazards and how to avoid them.<http://youtu.be/kz-KZGO65DA> * How to Safely Clean Spills in the Kitchen Within a commercial kitchen one of the most frequent accidents that can occur is slipping on a wet surface. These types of accidents are particularly hazardous because often they can cause back injuries and cause serious lost time. In most cases, these injuries are preventable with good safety management of spills.<http://youtu.be/ItTmGSEF0UM> * How to Use a Fire Extinguisher Accidents happen. Be prepared to fight your own fire by learning how to use a fire extinguisher.<http://youtu.be/lUojO1HvC8c> * Preventing Burns Within a commercial kitchen you will be exposed to high temperatures that could cause injury to you. Always think safety and have a plan.<http://youtu.be/5_1T0iLmOck> * Put Your Hands Together  CDC – Centers for Disease Control and Prevention   [https://www.YouTube.com/watch?v=SyRtMl4a1FE](https://www.youtube.com/watch?v=SyRtMl4a1FE)   * Sanitizing the Kitchen Consumers can protect themselves by preventing the spread of germs by both cleaning and sanitizing surfaces where food is prepared. This video explains how to make sanitizing solution with ingredients most people already have around the house.<http://youtu.be/_9IhS2jv2OM> |
| **Additional Required Components** | |
| **English Language Proficiency Standards (ELPS) Strategies** | * Word wall * Journal entries * Utilize four corners vocabulary/ word wall activity |
| **College and Career Readiness Connection[[1]](#footnote-1)** |  |
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| **Reading Strategies** | Current Events Assign student to read about global food borne illness outbreaks or food recalls. Information can be found in newspaper articles, magazines, journals, and online print. Suggestions:   * Cook Your Mother’s Day Cookies! <http://www.foodsafety.gov/blog/cookie_dough.html> * Perfect Food Safe Picnics! <http://www.foodsafety.gov/blog/perfectfood.html> * Keeping food safe when the power goes out<http://www.foodsafety.gov/blog/poweroutage.html>   Encourage students to “visualize” as they read. Many students are visual learners and will benefit from making sketches or diagrams as they read. Providing students with graphic organizers to help them organize their thoughts is also helpful. |
| **Quotes** | I have long believed that good food, good eating is all about risk. Whether we’re talking about unpasteurized Stilton, raw oysters or working for organized crime ‘associates,’ food, for me, has always been an adventure. **- Anthony Bourdain**  The history of government regulation of food safety is one of government watchdogs chasing the horse after it’s out of the barn. **-David A. Kessler, M.D. (FDA Commissioner)**  Food safety involves everybody in the food chain.  **-Mike Johanns**  Our job is to ensure that meat and poultry products are safe, wholesome, accurately labeled for the benefit of the American consumers, and to make sure that they are in compliance with all federal laws.  **-Mike Johanns** |
| **Writing Strategies**  **Journal Entries + 1 Additional Writing Strategy** | **Journal entries:**   * A cooking accident I had was … * A fire extinguisher would make a great gift because … * Food safety violations at food establishments that I have observed are … * Other careers that require proper hand washing are … because … * Food handler certifications are important because …   **Writing strategies:**   * Raft writing strategy is designed to demonstrate student understanding of material in a creative and relevant way.   + Role – first aid student   + Audience – elementary students   + Format – flyer   + Topic – what to do in case of a burn |
| **Communication**  **90 Second Speech Topics** | * Three things I learned about kitchen safety are … * The most important thing about personal hygiene is … * Three things I will teach my family about food safety is … |
| **Other Essential Lesson Components** | |
| **Enrichment Activity**  (e.g., homework assignment) | * Students can create signs on correct hand washing steps to post in all public restrooms in the school. * Students can make arrangement to play PSAs to be broadcast during announcements to remind students the importance of food safety. |
| **Family/Community Connection** | * Invite a fire fighter to speak to your students about how to put out a kitchen fire. He/she may do a demonstration and allow the students to use the fire extinguisher. * Invite the city/county health inspector to do a mock inspection of the kitchen labs to observe the conditions of the food prep areas. They will be able to give recommendations for keeping the kitchens clean and bug free. Use the handout Inspection Report 2006 for retail food establishments as a guide. * Inquire with the fire education officer at your fire department about speaking to your class about fire safety and proper fire extinguisher use. |
| **CTSO connection(s)** | **Family, Career, and Community Leaders of America**  [www.fcclainc.org](http://www.fcclainc.org)   * Illustrated Talk: An individual or team event – recognizes participants who make an oral presentation about issues concerning Family and Consumer Sciences and/or related occupations. Participants use visuals to illustrate content of the presentation. |
| **Service Learning Projects** | Successful service learning project ideas originate from student concerns and needs. Allow students to brainstorm about service projects pertaining to lesson.  Example: Students may contact local elementary schools to provide hand washing lessons to elementary students. |

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)