**TEXAS CTE LESSON PLAN**

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| **Lesson Identification and TEKS Addressed** |
| **Cluster** | Hospitality and Tourism |
| **Course** | Culinary Arts |
| **Lesson/Unit Title** | Current Trends in the Food Industry: Gluten-Free |
| **TEKS Student Expectations** | **130.254 (c) Knowledge and Skills**(8) The student understands the history of food service and the use of the professional kitchen. (A) The student is expected to analyze how current trends in society affect the food service industry(B) The student is expected to use large and small equipment in a commercial kitchen(C) The student is expected to develop food production and presentation techniques |
| **Basic Direct Teach Lesson** |
| **Instructional Objectives** | **Students will:*** Understand what gluten is and how it affects some people
* Identify food products with gluten
* Outline symptoms of celiac disease
* Identify gluten foods on various ingredient labels
* Develop a recipe that will meet the nutritional needs of a select group of people
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| **Rationale** | Have you ever wondered what the term gluten-free is? Why are restaurants adding gluten-free foods to their menus? We seem to hear the term more often lately. In this lesson, we will learn what gluten is and how it affects one person in 10 who may be gluten intolerant or have celiac disease. |
| **Duration of Lesson** | Four 45-minute class periods |
| **Word Wall** | **Celiac Disease:** An inherited, autoimmune disease in which the lining of the small intestine is damaged from eating gluten and other proteins found in wheat, barley, rye and possibly oats**Gluten:** A protein that is found in food processed from wheat, barley, and rye; gives elasticity to dough**Gluten Intolerance:**  A negative reaction, often delayed, to a food, beverage, or food additive. A person may be able to tolerate a small amount of the food but too much will make their body react |
| **Materials/****Specialized Equipment Needed** | **Equipment:*** Computer with projector for PowerPoint presentation
* Computers with Internet access (be sure to follow district guidelines for Internet access)

**Materials:*** Cookbooks (various)
* Magazine pictures of people who have celiac disease or gluten intolerance<http://probiotics.org/gluten-celebs/>

**Supplies:*** Cans of:
	+ Fruits
	+ Soups
	+ Spaghetti sauce
	+ Vegetables
* Packages of:
	+ Cereal
	+ Crackers
	+ Pasta
	+ Rice
* Include other canned and packaged food that you already have available in your pantry
* Copies of handouts

**PowerPoint:*** Current Trends in the Food Industry: Gluten-Free

**Technology:*** Free iPad App
	+ Gluten Free Recipes by Top Chefs – Celiac DietHow to make incredible gluten free meals<https://itunes.apple.com/us/app/gluten-free-recipes-by-top/id660194549?mt=8>

**Graphic Organizers:*** Current Trends in the Food Industry: Gluten-Free Notes
* Current Trends in the Food Industry: Gluten-Free Notes (Key)
* KWL – Gluten-Free Diets
* Ingredients Label (Box)
* Ingredients Label (Can)

**Handouts:*** Celiac Disease Chart
* Rubric for Community Leadership and Teamwork Experience
* Ingredients Label (Box)
* Ingredients Label (Can)
* KWL – Gluten-Free Diets

Rubric for Community Leadership and Teamwork Experience |
| **Anticipatory Set** | **Before class begins:**Display magazine or computer images of people who are gluten intolerant for who have celiac disease.<http://probiotics.org/gluten-celebs/>As students enter the classroom, allow them to observe the images of the celebrities.Ask students the following questions:* What do these celebrities have in common?
* What do you know about celiac disease?
* What do you know about gluten intolerance?
* Have you been ill after eating a food product made with wheat, barley, or rye?
* Why do we need to study about gluten-free diets?
* Why are restaurants providing customers with gluten-free menu items?
* What’s the big deal about gluten?

Distribute graphic organizer KWL – Gluten-Free Diets.Ask students to complete the chart by answering the first two sections:* K – What do they know about gluten-free diets?
* W – What do they want to know about gluten-free diets?

The last section will be completed in the Lesson Closure section. |
| **Direct Instruction with Special Education Modifications/****Accommodations** | Introduce lesson objectives, terms, and definitions.Distribute graphic organizer Current Trends in the Food Industry: Gluten-Free Notes so that students may take notes during slide presentation.Introduce PowerPoint Current Trends in the Food Industry: Gluten-Free and lead a discussion about gluten intolerance and celiac disease.View YouTube video:* GlutenGluten is a sticky protein composite found in cereal grains. Hank gives us some insight into the importance of gluten in history, as well as its impact on health in our own time. <http://youtu.be/p6CK_QlagWA>

*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
* printed copy of slide presentation
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| **Guided Practice with Special Education Modifications/****Accommodations** | Distribute graphic organizer(s) Ingredients Label (Box) or Ingredients Label (Can) and allow students to choose any package or can of food.Have students list all the ingredients of the package or can that be on the label. Allow them to investigate any ingredients they are not familiar with and identify them if they contain gluten.*Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:** peer tutoring
* allow extra time for assignment
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| **Independent Practice/****Laboratory Experience with Special Education Modifications/****Accommodations** | Work with your community to seek venues that will allow your students to practice their culinary skills in making gluten-free food.Examples:* Health fairs
* Homeless shelter
* Medical center specializing in celiac disease
* Ronald McDonald House
* School district food service

Distribute handout Rubric for Community Leadership and Teamwork Experience 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:** reduce assignment
* extended time
* peer tutoring
 |
| **Lesson Closure** | Review lesson objectives, terms, and definitions.Students will complete the KWL – Gluten Free Diets section labeled L.* L – What did I learn about gluten-free diets?
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| **Summative/End of Lesson Assessment with Special Education Modifications/****Accommodations** | Students will create a gluten free recipe.Students will be assessed with appropriate rubric.*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
* allow extra time for assignment
 |
| **References/****Resources** | **Textbooks:*** *Culinary essentials.* (2010). Woodland Hills, CA: Glencoe/McGraw Hill.
* *Foundations of restaurant management & culinary arts: Level one.* (2011) Boston, MA: Prentice Hill.

**Website:*** American Diabetes Association®We lead the fight against the deadly consequences of diabetes and fight for those affected by diabetes. /<http://www.diabetes.org/food-and-fitness/food/planning-meals/gluten-free-diets>
* Celiac Disease FoundationA non-profit, public benefit corporation driving diagnosis of Â celiac disease, dermatitis herpetiformis, and other gluten related disorders through advocacy, education and advancing research.<http://celiac.org/>
* Probiotics.orgstronger digestion & more<http://probiotics.org/>

**YouTube:*** GlutenGluten is a sticky protein composite found in cereal grains. Hank gives us some insight into the importance of gluten in history, as well as its impact on health in our own time. <http://youtu.be/p6CK_QlagWA>

**Video:*** How to Start Eating Gluten-FreeWondering how to start eating a gluten-free diet? This video from About.com provides six helpful tips about what to avoid and what to keep or add in to your gluten-free lifestyle.<http://video.about.com/celiacdisease/How-to-Start-Eating-Gluten-Free.htm>
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| **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
* Utilize Four Corners Vocabulary/ Word Wall Activity
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| **College and Career Readiness Connection[[1]](#footnote-1)** |  |
| **Recommended Strategies** |
| **Reading Strategies** | **Current events**Students can keep up with current trends and food trends by reading the following articles:* Celiac DiseaseAvoiding Gluten Cross-Contamination<http://www.eatright.org/Public/content.aspx?id=6442470092>
* Culinary Nutrition NewsAllergen Awareness: The Gluten-Free Edition<http://www.acfchefs.org/download/documents/ccf/nutrition/2012/201207_gluten-free_edition.pdf>
* Dining Out?How to Order Gluten-Free in a Restaurant<http://www.eatright.org/Public/content.aspx?id=6442470091>

**Reading Strategy:**Word Attack Strategies. Prior to reading, allow students to skim the passage or text, circling words that are unfamiliar to them. Once these words are decoded (glossary, dictionary, dictionary.com, classroom discussion) the student will have a better understanding of the pronunciation and meaning of the unfamiliar word(s) facilitating comprehension. |
| **Quotes** | Our philosophy is very simple. We combine product innovation with quality ingredients and outstanding customer service to create unique, great tasting food products that the whole family loves.**-John Marburger**Life is so brief that we should not glance either too far backwards or forwards…therefore study how to fix our happiness in our glass and in our plate.**-Grimod de la Reynière**Fear of carbs, of gluten, of everything – we’ve distanced ourselves from the beauty of food, the art of it. It makes me sad when people say, ‘Oh, I don’t eat gluten. I don’t eat cheese. I don’t eat this. So, I eat cardboard.**-Olivia Wilde**There’s a vegan and gluten-free bakery called Baby Cakes that I love. They’ve got shops in New York and Los Angeles. Their stuff is amazing. **-Zooey Deschanel**I’m gluten intolerant, so that automatically cuts carbs from my diet. **-Malin Akerman** |
| **Writing Strategies** | **Journal Entries:**“daily appetizer” – gluten* I am glad I am not allergic to gluten because…….
* People allergic to gluten cannot eat ………because ….
* Restaurants that provide gluten-free meals have to . . . (research recipes, use separate dishes to prepare meals and use gluten-free products)
* Celiac disease has been linked to various illnesses including autism. Discuss research positives and negatives.

**Writing Strategy:**RAFT writing strategy* + Role – customer with celiac disease
	+ Audience – restaurant chain
	+ Format – informal letter
	+ Topic – praising restaurant for providing gluten-free menu items
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| **Communication 90 Second Speech Topics** | * List three symptoms of celiac disease and how they can be avoided
* Discuss gluten free foods that can replace foods with gluten in a diet
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| **Other Essential Lesson Components** |
| **Enrichment Activity** | Students can compile a cookbook with gluten-free recipes to donate to families who are struggling with someone at home with gluten intolerance or celiac disease.Sections of gluten-free recipes may include:* Appetizers
* Entrees
* Side dishes
* Desserts
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| **Family/****Community Connection** | **Guest speakers**Invite school district personnel to speak to the class about how they write their menus, what they have to deal with in feeding hundreds of students every day, the nutritional rules and dealing with food related allergies in the schools.Speakers may include:* Food service director
* Food service manager
* School dietician
* School nurse
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| **CTSO connection** | **Family, Career, and Community Leaders of America**<http://www.fcclainc.org>* 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.
* Entrepreneurship: An individual or team event – recognizes participants who develop a plan for a small business using Family and Consumer Sciences skills and sound business practices. The business must relate to an area of Family and Consumer Sciences education or related occupations.
* Food Innovations: An individual or team event – recognizes participants who demonstrate knowledge of the basic concepts of food product development by creating an original prototype formula, testing the product through focus groups and developing a marketing strategy.
* 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.

**SkillsUSA:**<http://www.skillsusa.org/>* Commercial Baking – Challenges contestants to meet production and quality standards expected by industry. Students must scale, mix, prepare and bake six products (including breads, rolls, Danish, cookies, and pies) and demonstrate cake-decorating skills. They must deliver a quality, salable product while working efficiently and under job-like conditions.
* 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.
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| **Service Learning Projects** | Successful service learning project ideas originate from student concerns and needs. Allow students to brainstorm about service projects pertaining to the lesson. Brainstorm with the class about a service-learning project that is needed in the community.Visit the following website for ideas:* Youth Services of America Youth Changing the World[www.ysa.org](http://www.ysa.org)

Possible idea:Students may volunteer to prepare gluten-free recipes for local agencies when they have children with celiac disease.* Homeless shelter
* Orphanage
* Red Cross
* Ronald McDonald House
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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)