COURSE TITLE: Food and Wellness

Course Description:

Food and Wellness is designed to provide students with current industry knowledge and skills in nutrition and dietetics. This course covers the application of the science of food and nutrition to the health and well-being of individuals and groups. Major topics include nutrition, meal planning, safety, food science, and professional behavior. This course must be taught in a fully-equipped, residential-style kitchen.

Potential Certifications/Credentials:

ASK Institute – Concepts of Business Management / ASK Institute – Concepts of Entrepreneurship / Certified Guest Service Professional / Food and Beverage – Skills for Success / ServSafe Food Handler / ServSafe Manager

Course Scope and Sequence

Topic #	Topic Title	Estimated Hours
1	Foundational Standards	30
2	Nutrition Science	35
3	Meal Planning	25
4	Safety	30
5	Professional Behavior	20

Plans of Instruction

Foundational Standards

Supporting–will be taught throughout the course as needed for the unit.

F1. Incorporate safety procedures in handling, operating, and maintaining tools and machinery; handling materials; utilizing personal protective equipment; maintaining a safe work area; and handling hazardous materials and forces.

F2. Demonstrate effective workplace and employability skills, including communication, awareness of diversity, positive work ethic, problem-solving, time management, and teamwork.

F3. Explore the range of careers available in the field and investigate their educational requirements, and demonstrate job-seeking skills including resume-writing and interviewing.

F4. Advocate and practice safe, legal, responsible, and ethical use of information and technology tools specific to the industry pathway.

F5. Participate in a Career and Technical Student Organization (CTSO) to increase knowledge and skills and to enhance leadership and teamwork.

Topic 2 Title: Nutrition Science

Content Standards

1. Utilize the results of scientific studies to present an explanation of the influence of various factors on food and nutrition choices.
   Examples: socioeconomic, psychological, physiological, cultural, religious

2. Identify the nutrients that are essential for the human body and explain their application in professional dietetic practices.
   a. Explain how major nutrients are used during key structural and functional processes in the human body and describe problems caused by nutrient deficiencies.

3. Explain how diet-related factors affect the risk of disease.
   Examples: diabetes, high blood pressure, obesity

4. Describe food and menu modifications required with special diets.
   Examples: vegetarianism, veganism, sports nutrition, food allergies, fad diets

5. Research and report on dietary needs throughout the life cycle, including fertility, pregnancy, and lactation; infancy and early childhood; adolescence; adulthood; and later years.

6. Evaluate the appearance, aroma, taste, texture, and consistency of food products using sensory methods.

Unpacked Learning Objectives

Students know:

- How to locate a peer-reviewed research article.
- The factors that influence food and nutrition choices.
- The six nutrients that are essential to the human body.
- The major nutrients needed by the human body.
- The common nutrient deficiencies found in the human body.
- The most common diet related diseases.
- The requirements for common special diets.
- The sequence of the life cycle.
- The dietary needs during each stage of the life cycle.
- How to survey food products using sensory methods.

Students are able to:

- Compile research findings to present through written and oral reports.
- Identify the six classes of nutrients needed by the human body.
- Explain the major roles of each class of nutrients.
- Discuss the common nutrient deficiencies found in the human body.
- List the common diet related diseases and their causes.
- Create special diets that meet dietary requirements.
- Summarize the stages of the life cycle.
- Evaluate food products.

Students understand:

- Depending on an individual's situation, food and nutrition choices will be different.
- Nutrients are essential to the human body and applied in professional dietetic practices.
- There is a cause and effect relationship between major nutrients and the functions in the human body.
- Diet-related diseases have a wide range of health consequences.
  There are specific requirements for specialized
- Each stage of the human life cycle has different dietary needs.
- Sensory testing involves objective evaluation of food products by trained human senses.

Driving/Essential Question	Why do people choose certain foods over others? What are nutrients? How does the human body use nutrients? How does nutrition affect health? What challenges do people at different stages of the life-cycle face in maintaining good nutrition? How do dieticians use specialty and modified diets to meet the nutritional needs of their clients? What factors do we use to evaluate food products objectively?
Exemplar High Quality Task	Develop, prepare, and evaluate a recipe that meets a specific dietary need.

Map of Student Learning by Learning Objective

Unpacked Learning Objective SWBAT	Potential Subtasks for Assessments Formative/Summative	Potential Learning Activities Link to Differentiation Examples	Integrated and Related Academic Content: ELA, Math, Science, and/or Social Studies Concepts and Activities	Equipment, Technology and Materials Equipment List by CTE Cluster Link to Helpful Tech Tools
Compile research findings to present through written and oral reports.	**Formative:** Guided reading form, graphic organizer **Summative**: Article presentation, research project and presentation of findings.	Class discussion: Why do you choose the foods you eat? What factors might influence your choice? Assign students to small groups and provide each group with a guided reading form to ensure understanding. Review the process of using the guided reading form to take notes on the reading and determine key points. Assign each small group an article or short reading on food choice. Examples may include scientific articles on convenience foods, trends in the restaurant industry, new technology in food preparation, or cultural influences on food choices.	**Math:** Use elapsed time to calculate processing and reaction times to compile reports. **ELA**: Compose a Post Discussion Summary/Reflection of the key ideas presented in the small groups. Utilize the Reflection/Summary to compose a focused,organized, coherent oral report, **Social Studies:** Create a presentation about the foods you choose to eat, share your presentation within a small group. **Social Studies:** Create a poll for classmates to	Guided reading form Graphic organizer Presentation materials/ technology

		Students use the guided reading form to create a presentation for the class that summarizes the article or reading and sparks discussion of the topic. Students use a graphic organizer to take notes during each group's presentation. Students work in small groups to develop an experiment on factors that influence food choice, such as a taste test between brand name or generic food items or a survey in which participants rate items based on cost, convenience, and palatability. Students present their findings to the class.	complete about the most popular foods in the class. **SCIENCE:** Generate a debate with AI concerning US food regulations then present findings to a peer for peer review. *Make sure to check district policy on use of AI	
Identify the six classes of nutrients. Explain the major roles of each class of nutrients.	**Formative:** Jeopardy game, station rotation activities, meal plan **Summative**: Lab experience, reflection and self-assessment	Engage students and activate prior knowledge with a game of nutrient jeopardy. Students work in teams to answer questions on the six essential nutrients and earn points for each correct answer. Explain the concept of nutrients, the difference between essential and	**Math:** Use a Venn diagram to compare the six classes of nutrients. **Math:** Create organizational charts and graphs to compare the major roles of each class of nutrients. **ELA**: Using notes from the assigned article, the	Jeopardy game Graphic organizer Station rotation "body" pieces and research materials Food lab equipment and ingredients Self-assessment and reflection guidelines and rubric

		non-essential nutrients, and the role of nutrients in the work of dieticians. Students use a graphic organizer to take notes on key points. Students explore concepts through a station-rotation activity. Build a body: students move from station to station, picking up paper "body parts" as they go and taking notes on how nutrients affect different body systems and functions at each station. *Example: at the lipids station students pick up a cut out of a brain and use it to take notes on the role of lipids in brain function and neurological health. At the end students use their "body parts" to build a body and present their findings to the class.* Students work in small groups to plan a meal that meets pre-determined nutritional needs Students prepare one dish from their meal plan and	graphic organizer, and information gained from the game, compose a brief essay arguing the importance of choosing the right nutrients. **Social Studies:** Research how the classes of various nutrients have changed since the 1920's in the United States. **ELA**: Vocabulary Builder-Allow students to break periodically during the lesson to define unfamiliar words. Apply newly acquired vocabulary in the composition of their meal plan. **SCIENCE:** Create a visual model that relates the six classes of nutrients to their major characteristics.	

		present it to the class, explaining their thought process in selecting ingredients. Students complete a self-assessment and reflection on their lab experience.		
List the major nutrients needed by the human body. Discuss the common nutrient deficiencies found in the human body.	**Formative**: Case study, guided notes, small group research **Summative**: Recipe, lab/presentation, self-assessment/reflection	Students are given a case study of a patient presenting with symptoms of a nutritional deficiency. Using a guide, students have to eliminate "suspects" to determine which deficiency is affecting the patient and how they can treat them. Lecture and guided notes on the structural and functional role of nutrients (i.e. bone health, tissue repair, hormone production) and the effect of nutritional deficiencies on these structures and functions. Small group research on nutritional deficiencies. Students develop a recipe that addresses their assigned deficiency. Students work in small	**Math:** Use decimals, percents, addition, and subtraction to measure the number of nutrients needed by the human body. **Math:** Calculate the risk ratio of developing anemia in individuals with low dietary iron intake compared to those with adequate intake. **ELA**: Review the concept of Fact vs Opinion. Introduce/revisit the importance of using reputable websites in research. **SCIENCE:** Participate in McMush Nutrient Lab then create questions for classmates that present possible complications concerning nutrient deficiencies.	Case study Reading guide Guided notes template Food lab equipment and ingredients Reflection guidelines and rubric

		groups to prepare their recipe and present it to the class, explaining the role of each ingredient in addressing nutritional needs. Students write a reflection on the role of dieticians in keeping patients healthy throughout the lifespan.		
List the common diet related diseases and their causes.	**Formative**: A to Z vocabulary game, guided notes, graphic organizer, reading response **Summative**: Smoothie recipe, lab, recipe evaluation	Students play “A to Z” with the content vocabulary. Vocabulary terms are posted around the classroom on poster paper. Students move from poster to poster adding related concepts that begin with successive letters of the alphabet. Discuss and clarify any misconceptions or questions students may have. Lecture with guided notes and class discussion on how these terms are related and how they relate to the study of nutrition. Assign a reading focused on a diet-related disease. Students use a graphic organizer to take notes on key points in the reading. Students then use their	**Math:** Use Venn diagrams, tables, or charts to compare and contrast various diet-related diseases and their causes. **ELA**: As an Active Reading strategy, allow students to annotate the text and use context clues to define the assigned vocabulary. **Social Studies:** Research a common diet related disease and the causes, write an essay about your findings. **SCIENCE:** Determine if a common diet related disease is regulated by genetics or environmental influences or both (Example lactose intolerance.) Create a	Chart paper Guided notes template Graphic organizer Recipe template Food lab equipment and ingredients Evaluation criteria

		notes to formulate a response to the author. Students work in small groups to develop a smoothie recipe that addresses common nutritional concerns, such as cholesterol, sodium, sugar, and dietary fiber. Students trade recipes with other groups, make the smoothie, and evaluate the recipe based on its nutritional benefits, flavor, and ease of preparation.	chart with several examples.	
Create special diets that meet dietary requirements.	**Formative**: Scavenger hunt, poster presentation, guided notes **Summative**: Specialized diet menu, modified dish lab	Engage students with an "allergen scavenger hunt." Students use clues posted around the classroom to fill in a crossword puzzle about common allergens and the symptoms of allergic reactions. Students find news articles about food allergies, intolerances, specialty diets, and therapeutic diets. Students use information from the articles to create an informative poster on the topic and present it to the class.	**Math:** Calculate the percentage of each nutrient in a diet and ensure that these percentages align with dietary recommendations. **ELA**: Presentation - Speaking using visual aids. Allow student groups to practice presentation in order to limit reading slides from a presentation and focus on speaking and delivering the presentation using knowledge acquired through research. **Social Studies**: Research different special diets and	Chart paper News sources (digital or print) Poster materials Guided notes template Menu template Food lab equipment and ingredients

		Lecture with guided notes on dietary modifications, specialty diets, and nutritional needs. Students use lecture notes, student-generated posters, and other provided sources to develop a menu for an assigned special diet. *Examples: vegan, gluten-free breakfast OR lactose- and nut-free dessert* Students create a modified dish that meets special dietary needs, such as coconut cream ice cream or gluten-free pizza.	their dietary requirements, create a presentation and a plan that meets the standard dietary requirements. **SCIENCE:** Using provided case studies create a diet plan for one patient then present the plan to a peer for peer review.	
Summarize the stages of the life cycle.	**Formative**: Matching game, webquest **Summative**: Cafeteria design and presentation	Introduce the topic of life-cycle nutrition with a matching game. Students must match a life-stage card with a card describing specific dietary needs for that life-stage. Students compare menus created for varied life stages, such as a preschool menu, college dining hall menu, retirement home menu, and maternity ward menu. Students find similarities	**Math:** Calculate the recommended nutritional values required at each stage of the life cycle. **ELA**: Integrate summarizing strategies into various stages of the lesson before the final presentation. Allow students opportunities to summarize at various stages of the lesson before completing final summative assignment	Matching game cards Sample menus Webquest template Student devices Materials for cafeteria design Food lab equipment and ingredients

		and differences between the menus and infer how each menu meets the dietary needs of that life cycle. Students complete a webquest using the Dietary Guidelines for Americans, comparing dietary needs across the lifespan and how these needs are met by each food group. Discuss results and clarify any questions or misconceptions. Students use their webquest and sample menus to design a cafeteria for an assigned age group, with a one-week menu that meets the dietary needs of that age group. Students may expand this project by creating one meal from their menu and presenting samples to the class. Students present their cafeteria and menu design to the class and evaluate each other's work using a rubric.	**Social Studies:** Create a podcast that discusses the different stages of the life cycle. **SCIENCE:** Use Canva or a related template to create an infographic that summarizes the life cycle.	
Evaluate food products.	**Formative**: KWL, sensory evaluation	Blind taste test. Students sample several food and	**ELA**: Create a list of the **Key Ideas and details**	Food items for taste test Video on sensory analysis

	rubric **Summative**: Sensory evaluation lab, written reflection	drink items while blindfolded OR with the item out of view. Students describe the food item in sensory terms and try to guess what each item might be. Students watch a video on sensory analysis and take notes using a KWL chart. After the video, students discuss the importance of sensory analysis in food product development. Provide students with the criteria for sensory evaluation. Using this criteria, students create a rubric for sensory analysis.Students use their rubric to re-evaluate the items from their blind taste test. Students prepare a simple recipe in class and invite guest taste-testers to try their product and rate it using the rubric they created. Students compose a written reflection on their lab experience and the process of sensory	**(ACT prep)** from the video to be used to develop a written reflection that is focused and organized for a specific audience. **Social Studies:** Research various food products and create a poster on how those food products should be used. **SCIENCE:** Participate in food label analysis. Elaborate on section two by creating a graphical representation of data collected.	KWL chart Rubric template Food lab equipment and ingredients Copies of student-developed sensory analysis rubric

		evaluation.		

Key Vocabulary

knowledge, personal taste preference, mood, specialty diet requirements, ethnicity, income, vitamins, minerals, proteins, fats, water, carbohydrates, iron deficiency, iodine deficiency, vitamin D deficiency, vitamin B12 deficiency, calcium deficiency, vitamin A deficiency, magnesium deficiency, fact, opinion, key ideas, annotate

Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Recipe and meal plan development, research on the roles and responsibilities of dieticians, lab experiences

CTSO Connection:

FCCLA STAR event incorporation: Food Innovations, Nutrition and Wellness

Certification/Credential Connection:

ServSafe Food Handler, ServSafe Manager

Topic 3 Title: Meal Planning

Content Standards

7. Construct and prepare menus that meet nutritional needs, using current dietary guidelines and addressing life cycle, special diets, and diet-related disease.

8. Research and prepare foods for common therapeutic diets for medical conditions that require a modified diet.
   Examples: clear liquid diet, diabetic diet, renal diet, gluten-free diet, low-fat diet, high-fiber diet

9. Compare and contrast food preparation methods to determine which ones most effectively conserve nutrients in vegetables, fruits, and proteins.
   Examples: steaming, grilling, roasting, sauteing, boiling, convection

Unpacked Learning Objectives

Students know:
- How to research the requirements to create menus for different nutritional needs.
- The factors (nutrients, texture, and/or food allergies or food intolerances) to consider in planning therapeutic diets.
- The procedures to follow to plan and prepare a given therapeutic diet.
- The procedure to prepare vegetables, fruits, and proteins to conserve nutrients.

Students are able to:
- Prepare menus for different diet requirements.
- Prepare a given therapeutic diet
    - diabetic diet
    - full liquid diet
    - high fiber diet
    - lactose-free diet
    - low fat/low cholesterol diet
    - low protein
- Prepare vegetables, fruits, and proteins using a method to conserve nutrients.

Students understand:
- Research and care must be given to the menus for different groups.
- When preparing and presenting therapeutic diets to a person, the diet must fit the needs of a particular person.
- When steaming, sauteing, pressure cooking, pickling, drying or dehydrating vegetables, fruits, and proteins, they are conserving nutrients.

Driving/Essential Question	How do nutrition professionals design menus to meet varying nutritional needs? What is a therapeutic diet? How can food preparation methods affect the nutritional value of foods?
Exemplar High Quality Task	Menu design, preparation, and presentation meeting specific life-cycle and dietary needs.

Map of Student Learning by Learning Objective

Unpacked Learning Objective SWBAT	Potential Subtasks for Assessments Formative/Summative	Potential Learning Activities Link to Differentiation Examples	Integrated and Related Academic Content: ELA, Math, Science, and/or Social Studies Concepts and Activities	Equipment, Technology and Materials Equipment List by CTE Cluster Link to Helpful Tech Tools
Construct menus that meet nutritional needs. Construct menus that meet current dietary guidelines. Construct menus that address the different life cycles. Construct menus for special diets. Construct menus for diet-related diseases.	**Formative**: Dietetics program brochure **Summative**: Lab and presentation	Present students with a blank MyPlate graphic. Ask students to fill in their plate with their ideal meal. When students have completed their plates, ask them to exchange plates with a partner and research the nutritional value of their partner's meal, including total calories, protein, fat, saturated fat, vitamins, and minerals. Online tools such as WebMD Food Calculator or Nutritionix Food Database provide a basic platform students can use to search for this information. Present students with images of meals that meet the MyPlate guidelines. Ask students to compare	**Math:** Create, compare, and contrast various meal plans and display the nutritional needs using tables, charts, and graphs. **ELA**: Integrate research skills with the focus on a variety of print and non-print material. Present research findings to peer audiences. **Social Studies**: Create a menu for each decade from 1920- 2000 and how the menus have changed. Examine outside factors including war, depression, and social changes.	MyPlate graphic Student devices OR reference materials Images of meals Copies of Dietary Guidelines for Americans OR internet access to view electronically Classroom materials to create brochures Guidelines for food lab activity Food lab equipment and ingredients

		these meals with the ones they have designed as their “ideal” meals. Explain that MyPlate is a method of communicating the information in the Dietary Guidelines for Americans simply and effectively. Review the key takeaways in the current Dietary Guidelines for Americans and the concept of lifespan nutrition. Explain the role of dieticians in developing menus for people with varying dietary needs across the lifespan. If possible, invite a dietician into the classroom as a guest speaker. Students work in pairs to research post-secondary programs in dietetics across the state, including coursework, internship opportunities, and cost of attendance. Students will create a brochure for each program that includes this information as well as other “fun facts” about the school and campus life. Students	**ELA**: Speaking and Listening- Introduce **Active Listening** skills. Allow students to use peer feedback for planning, revising and editing. Encourage students to practice delivery, revisit and revise presentations before final delivery. **SCIENCE:** Create a set of questions to be used while interviewing a dietician. Questions should center around criteria/ how decisions are made when constructing meal plans under various circumstances.	

		exchange and review each others' brochures. Students work in small groups to prepare and serve a menu for a specified meal that meets pre-determined dietary and life-cycle needs. Students must present their meal to the class with information on the dietary needs their menu reflects. Students should present their prepared meal in a way that reflects the life-cycle represented. *Example: Students prepare a balanced lunch for toddlers. In presenting the lunch, they use cookie cutters to cut sandwiches into shapes and cut items such as grapes or cherry tomatoes in half to prevent choking hazards.*		
Research food requirements for common therapeutic diets. Research food requirements for medical conditions that require a modified diet.	**Formative**: Role-play game, sensory evaluation of lab **Summative**: Recipe development, lab	Role-play scenario: Provide several students with a "patient background" card that includes their symptoms and other key information that can be used to prescribe a therapeutic diet, (i.e. immediately post-op colon surgery, acute renal failure,	**Math:** Use decimals and percentages to calculate rates of change within common diets and modified diet techniques. **Social Studies**: Research the development of therapeutic diets and write	Patient background cards Recipe form and/ or guidelines for lab activity Food lab equipment and ingredients Sensory evaluation criteria

		recovering from severe vomiting, diabetic crisis) Students develop a recipe that meets the needs of a predetermined therapeutic diet. Students create their food product in the lab and present it to the class. Students use sensory evaluation criteria to evaluate their product and make recommendations for improvement.	a research paper on the topic. **SCIENCE:** Argue from evidence concerning holistic food medicine vs modern food medicine. Then, write a claim to support one or the other.	
Analyze food preparation methods to determine the most effective way to conserve nutrients in vegetables, fruits, and proteins.	**Formative**: Taste test, class discussion participation, guided notes **Summative**: Lab, lab evaluation	Students taste test food items prepared in multiple ways, such as banana chips vs. freeze-dried bananas, steamed vegetables vs. sauteed vegetables, or sun-dried tomatoes vs. pickled tomatoes. As students work their way through the tasting stations, they complete an evaluation comparing the qualities of each item and guessing which item contains the most nutritional value. Discuss the results of the taste test. Students defend their positions on the nutritive value of food items prepared in different ways.	**Math:** Create charts and graphs to compare and contrast nutrients in vegetables, fruits, and proteins. **ELA**: Develop an argument essay using credible sources and information gathered from the class discussion, sensory evaluation, participation and guided notes. Cite sources of information or data when relevant, **Social Studies:** Research the history of food preparation methods and how nutrients have been preserved in various cultures.	Food items for tasting stations Evaluation form for tasting stations Guided notes template Food lab equipment and ingredients Sensory evaluation criteria

		Ask leading questions to encourage participation. Lecture with guided notes on food preparation methods and their effect on nutrition, including heat, moisture, and oxygen exposure. Students work in small groups to prepare the same food item in a variety of methods. *Example: Green beans steamed, sauteed, pressure cooked, pickled, and dehydrated. Note that pickling and dehydrating will take multiple class periods.* Students use sensory evaluation criteria to evaluate the palatability of each item and compare the taste and appearance with the nutritional benefits of each cooking method.	**SCIENCE:** Design a lab to test the nutritional effects of microwaving foods.	

Key Vocabulary

nutritional needs, dietary guidelines (Dietary Guidelines for Americans), life cycle, special diets, diet-related disease, common therapeutic diets, medical conditions that require modified diet, food preparation methods, nutrients in vegetables, nutrients in fruits, nutrients in proteins

Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Menu planning and meal preparation, lab experiences

CTSO Connection:

FCCLA STAR Events: Nutrition and Wellness, Food Innovations

Certification/Credential Connection:

ServSafe Food Handler, ServSafe Manager

Topic 4 Title: Safety

Content Standards

10. Research and report on microorganisms that cause foodborne illnesses, including symptoms of exposure.

11. Explain the procedures and conditions required to prevent the growth of microorganisms during growing, slaughtering, and commercial preparation of food.
    Examples: listeria found on lettuce, salmonella in chicken

12. Summarize measures recommended by the Centers for Disease Control for home cooks to reduce the possibility of spreading illness-causing microorganisms.
    a. Outline procedures for reporting foodborne illnesses to health departments and other authorities.

Unpacked Learning Objectives

Students know:

- The difference between the Big 6 food borne illnesses.
- How to prevent the growth of microorganisms during the growing, slaughtering and commercial preparation of food.
- The importance of home cooks not causing foodborne illnesses.
- The procedures the home cook must follow to reduce the risk of causing a foodborne illness.
- How and when to report a foodborne illness.

Students are able to:

- List the Big 6 food borne illnesses.
    - Salmonella
    - Salmonella typhi (Typhoid)
    - Shigella
    - E.coli
    - Norovirus
    - Hepatitis A
- Design flyer/brochure to explain the Big 6 food borne illnesses and symptoms of exposure.
- List methods to prevent the growth of microorganisms during the growing, slaughtering, and commercial preparation of food.
- Outline the steps a home cook must follow to prevent a foodborne illness.
- Create a flier on how to report foodborne illness.

Students understand:

- It is impossible to know all of the foodborne illnesses, but they should know the Big 6.
- Procedures must be followed to prevent the growth of microorganisms during the growing, slaughtering, and commercial preparation of food.
- Steps for preventing microorganism growth during preparation are important while preparing food.
- Foodborne illness can be identified by specific symptoms and traced to physical, chemical, or biological contaminants.
- Food professionals follow specific procedures for reporting foodborne illnesses.

Driving/Essential Question	What is foodborne illness? How are foodborne illnesses spread? What can food producers do to prevent foodborne illnesses? How can home cooks keep their food safe? How should suspected foodborne illnesses be reported?
Exemplar High Quality Task	Students script, perform, film, and edit a public service announcement educating a target audience about food safety in home kitchens.

Map of Student Learning by Learning Objective

Unpacked Learning Objective SWBAT	Potential Subtasks for Assessments Formative/Summative	Potential Learning Activities Link to Differentiation Examples	Integrated and Related Academic Content: ELA, Math, Science, and/or Social Studies Concepts and Activities	Equipment, Technology and Materials Equipment List by CTE Cluster Link to Helpful Tech Tools
List the Big 6 food borne illnesses. ● Salmonella ● Salmonella Typhi (Typhoid) ● Shigella ● E.coli ● Norovirus ● Hepatitis A Design flyer/brochure to explain the Big 6 food borne illnesses and symptoms of exposure.	**Formative**: Food CSI, small group research **Summative**: Microorganism educational presentation	Food CSI: Provide students with a set of case studies. In each case study, a "patient" presents with symptoms of a foodborne illness and provides a case history, including recent meals. Students use the provided clues and information from the CDC website to determine which foodborne illness is responsible for each case. Finally, students recommend a course of treatment for the patient and corrective action for the restaurant or food production facility. Students find examples of foodborne illness outbreaks in the news. Working in small groups,	**Math:** Use tables, charts, graphs, or Venn diagrams to compare the symptoms of foodborne illnesses. **ELA**: Active Reading and Research skills. Revisit research skills with a focus on locating and determining relevant, credible sources **Social Studies**: In groups, create a poster about one "Big 6" food borne illness that could serve as a warning campaign. Present your poster with the class when completed. **SCIENCE:** Using data provided by CDC , create a chart within a brochure	Case studies Student devices with internet access and/ or reference materials Poster materials and/ or technology tools for creating videos, posts, or infographics

		students summarize each case and state the preventative action they believe should have been taken. Students demonstrate their understanding of the microorganisms that cause foodborne illness by selecting one common foodborne illness for more research. Students create a poster, short video, or social media post designed to educate the general public about this microorganism and its symptoms, with recommendations for prevention.	that provides quantitative and qualitative data.	
List methods to prevent the growth of microorganisms during the growing, slaughtering, and commercial preparation of food.	**Formative:** Class discussion, guided notes **Summative:** Food production, children's book	Present students with a variety of food items. Ask students to list the steps each food item must go through in order to reach the consumer. Discuss and provide clarification. Ask students to identify points in the production process that might be critical to food safety. Discuss answers. Lecture and guided notes on critical control points,	**Math:** Use exponential growth models to show how quickly microorganisms can grow during food preparation. **ELA**: Encourage students to use multiple sources and consider varying perspectives as they respond and to contribute the discussions **Social Studies**: Research and read articles regarding commercial preparation of	Examples or images of food items, both processed and unprocessed Guided notes template Classroom materials and/ or technology tools for creating children's book

		monitoring guidelines, state and federal regulations, and corrective actions common at each stage of food production. Students use their notes to create a children's book that explains the process of food production, including safety measures taken at each step in the process.	food. Write an article regarding an opinion on the prevention of the growth of microorganisms in that process. **SCIENCE:** Participate in Glo Germ lab to illustrate the importance of aseptic technique.	
Outline the steps a home cook must follow to prevent a foodborne illness.	**Formative:** CSI activity, guided notes **Summative:** PSA, lab	CSI: Food Safety. Prepare a series of "crime scenes" in the food lab using images or models of various foods and examples of time and temperature abuse, poor cleaning and sanitizing, poor personal hygiene, and cross-contamination. Students work in small groups to identify as many safety violations as possible. Discuss results. Lecture and guided notes on food safety and preventative measures in home kitchens. Students fill in a chart with the four key points of home food safety: cook, chill, separate, and clean.	**Math:** Use precise measurements and proportions when following recipes to ensure food safety and quality. **ELA**: Utilize a writing process which includes planning, revising, editing/peer-editing, and rewriting to create a focused, organized, and coherent piece of writing for a specific purpose and audience. **Social Studies:** Research various social movements that increased the popularity of the home cook. Create a TikTok or 30 second video	Images or models of food and other materials for use in "crime scene" creation Food lab equipment and ingredients Guided notes template Student devices with internet access for PSA creation Safety documentation form for lab activity

		Students use their guided notes to create a public service announcement teaching young adults the principles of food safety. Students demonstrate their understanding of food safety principles in the food lab. As they prepare a recipe, they document food temperature, separating raw and ready-to-eat foods to prevent cross-contamination, proper handwashing and personal hygiene, and cleaning and sanitation techniques.	highlighting this social movement. **SCIENCE:** Create a diagram of a generic home kitchen. Place a red X where hidden germs could be lurking.Compare your diagram with a neighbor then get a class tally in order to complete a class bar graph.	
Create a flyer on how to report foodborne illness.	**Formative:** Case study, notes, regulatory agency chart **Summative:** Consumer education flyer	Present students with a case study portraying a foodborne illness outbreak. Ask students to list the steps they would take to stop the spread of the outbreak and ensure that those affected received appropriate care. Discuss responses. Lecture and notes on local, state, and federal health authorities and the scope of each entity in responding to foodborne illness.	**Math:** Design visuals to trace reported foodborne illnesses. **ELA**: Integrate reading and interpreting informative text. Annotate and evaluate the use of formal and informal language in academic writing. Use context clues to determine the meaning of unfamiliar words. **Social Studies**: Create multiple flyers to spread awareness about foodborne illness and how	Case study Chart paper Classroom materials for creating fliers

		Students create a chart showing the relationship between various health authorities and enforcement agencies. Students create a flyer informing consumers how to report suspected foodborne illness outbreaks, including which health authority should be contacted and the contact information for those authorities.	to report it to the correct health authority. **SCIENCE:** Obtain a food borne illnesses flyer from the local health department and make observations of the information and formatting to assist in creating assigned flyer activity.	

Key Vocabulary

microorganisms, foodborne illnesses, growing of food, slaughtering of food, commercial preparation of food, Centers for Disease Control, home cooks, Health Department/other authorities, formal and informal language, annotate, context clues, relevant and credible sources

Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Lab experiences, PSA production, consumer education activities

CTSO Connection:

FCCLA STAR Event Food Innovations

Certification/Credential Connection:

ServSafe Food Handler, ServSafe Manager

Topic 5 Title: Professional Behavior

Content Standards

13. Describe the focus, membership, and mission of various professional associations in the field of nutrition and dietetics.

14. Interpret local, state, and federal legislation, regulations, and licensure laws related to dietetics and nutritional services.

15. Summarize information on nutrition resources, services, and agencies available in the community.

16. Demonstrate ethical behavior and human relations skills when interacting with patients and clients.

Unpacked Learning Objectives

Students know:

- The significance of membership in various professional associations in the field of nutrition and dietetics.
- The focus, membership, and mission of professional associations in the field of nutrition and dietetics.
- Why local, state, and federal legislation, regulations, and licensure laws related to dietetics and nutritional services are necessary.
- How to research to find nutrition resources, services, and agencies available in their community
- Appropriate and non-appropriate ethical behavior when interacting with patients.
- Appropriate and non-appropriate human relations skills when interacting with clients.
- How to report a HIPAA violation.
- The consequences of a HIPAA violation.

Students are able to:

- Analyze the focus of selected professional associations in the field of nutrition and dietetics.
- Analyze the membership requirements of selected professional associations in the field of nutrition and dietetics.
- Analyze the mission of selected professional associations in the field of nutrition and dietetics.
- Explain the local, state, and federal legislation, regulation, and licensure laws related to dietetics and nutritional services.
- Research nutrition resources, services, and agencies available in their community.
- Interact appropriately with patients and clients.

Students understand:

- There are benefits of memberships in professional associations related to the field of nutrition and dietetics.
- Local, state, and federal legislation, regulations, and licensure laws related to dietetics and nutritional services serve a purpose in protecting clients, patients, and professionals.

- Nutrition resources, services, and agencies are available in their community and serve a key purpose in promoting the health and well-being of community members.
- Ethical behavior and human relations skills are needed when interacting with patients and clients.

Driving/Essential Question	What are professional associations? What professional associations exist in the nutrition and dietetics field? What laws and regulations govern the practice of dietetics and nutritional services? What nutrition services, resources, and agencies are available to community members? How do dietetics and nutrition professionals maintain ethical behavior with patients and clients? How do dietetics and nutrition professionals maintain ethical behavior with peers? What is HIPAA? What are the consequences of violating HIPAA regulations?
Exemplar High Quality Task	Students create and present a promotional brochure, website, or social media campaign for a selected professional organization.

Map of Student Learning by Learning Objective

Unpacked Learning Objective SWBAT	Potential Subtasks for Assessments Formative/Summative	Potential Learning Activities Link to Differentiation Examples	Integrated and Related Academic Content: ELA, Math, Science, and/or Social Studies Concepts and Activities	Equipment, Technology and Materials Equipment List by CTE Cluster Link to Helpful Tech Tools
Analyze the focus of selected professional associations in the field of nutrition and dietetics. Analyze the membership requirements of selected professional associations in the field of nutrition and dietetics. Analyze the mission of selected professional associations in the field of nutrition and dietetics.	**Formative:** Small group research, class discussion **Summative:** Promotional material for assigned professional organization	Arrange students in small groups. Ask students to collaborate as a group to answer the question "What is the purpose of professional organizations?" Share responses and discuss. Assign a relevant professional organization to each small group. Students will collaborate to research the mission, membership requirements, and benefits of their assigned organization. Students will use their research to create a promotional brochure, video, web page, or social media campaign for their	**Math:** Use Venn diagrams to compare and contrast membership requirements for selected professional associations in the field of nutrition and dietetics. **ELA**: Synthesize information from varying sources to compose writing that incorporates relevant, credible information and vocabulary. **Social Studies**: Research one professional organization of nutrition and dietetics and why it was created. Create a powerpoint based on your findings. **SCIENCE:** From at least three professional	Student devices with internet access and/ or reference materials Classroom materials and/ or student devices with internet access for brochure creation, web page design, social media campaign

		assigned professional organization.	associations, analyze the focus, requirements and mission. Determine a unifying common theme to serve as a claim for the focus, requirements and mission of professional associations in the field of nutrition and dietetics.	
Explain the local, state, and federal legislation, regulation, and licensure laws related to dietetics and nutritional services. Research and summarize nutrition resources, services, and agencies available in their community.	**Formative:** Law and regulation chart, nutrition services graphic organizer **Summative:** Nutrition services poster	Provide students with a chart labeled with the following headings: Law, State Regulations, Federal Regulations, Licensure Laws. Hang examples of each type of regulation or law around the classroom. Ask students to read the examples and fill in the chart by copying the example into the appropriate column. Discuss results. Explain the difference between laws and regulations and how each affects nutrition professionals in their practice. Explain where these laws and regulations can be found and how professionals ensure that they are in compliance.	**Math:** Create charts, tables, and graphs to organize law, state, and federal legislation, regulations, and licensure laws related to dietetics and nutritional services. **ELA**: Identify specific language and rhetoric relevant to formal documents like legislation, licensure and regulations. Compare the use of formal and informal language conversation and writing. **Social Studies:** Create a chart that shows the policies put into place for local, state and federal regulations. **SCIENCE:** Gather data from local municipalities on laws and services related to nutrition. Determine vital knowledge for teens then	Copies of chart (1 per student) Print examples of regulations and laws Graphic organizer Classroom materials for poster project

		Ask students to identify nutrition services available in their area. Discuss responses. Lecture and graphic organizer on nutrition services, resources, and agencies. Students use their graphic organizer to create a poster educating community members on the services available to them and how to access those resources. Students present their posters to the class.	create a student friendly version in the form of a virtual infographic.	
Interact appropriately with patients and clients.	**Formative:** Notes on scenario **Summative:** Student-created scenarios	Ask for two student volunteers to act out a scenario. Provide each volunteer with a card giving their role and a brief scenario in which a nutrition professional interacts with a client or patient. The volunteers should begin by modeling unprofessional behavior. While the volunteers act out their scenario, students should observe and make notes on the interaction. Discuss students' observations. Ask students	**Math:** Use elapsed time to calculate the interaction between the patient and clients. **SCIENCE:** Make observations from videos of appropriate client interactions. Create a chart containing both quantitative and qualitative data of helpful/ necessary vocabulary and number of times used.	Scenario cards

		whether the behavior modeled represented appropriate and professional interactions. Ask students for suggestions to correct the behavior modeled in the scenario. Have the student volunteers re-enact the scenario taking the actions proposed by the class. Discuss the differences between the two interactions. Ask students to pair with a partner and create their own scenario. Students should first model unprofessional or inappropriate interactions, and then, correct their behavior.		

Key Vocabulary

membership, mission, professional associations, legislation/regulations/licensure laws (local, state, federal), nutrition resources, nutrition services, nutrition agencies, community, ethical behavior, human relations skills when interacting with patients, human relations skills when interacting with clients

Work-Based Learning, Simulated Work Experiences, and Experiential Learning:

Promotional material for professional organization, professional behavior modeling, community nutrition services education

CTSO Connection:

FCCLA STAR Event Career Investigation

Certification/Credential Connection:

ASK Institute – Concepts of Business Management