

# Food Science & Nutrition

## Unit 1 (Kitchen Safety)

Estimated Unit Time Frames	Big Ideas	Essential Questions	Concepts (Know)	Competencies (Do)	Lessons/ Suggested Resources	Vocabulary	Standards/ Eligible Content
1-2/45 min lessons	Families are the fundamental unit of society; strong families empower individuals to manage the challenges of living and working in a diverse, global society	What actions can a person take to be safe in the kitchen?	practice appropriate procedure in the kitchen to prevent accidental injury	Demonstrate appropriate behavior in the classroom and while working with others in the classroom	Teacher lead discussion / question & answer	Expectations	11.2.9.B Know FCCLA action planning procedure and how to apply it to family, work and community decisions
1-2/45 min lessons	Families are the fundamental unit of society; strong families	What are the advantages and disadvantages of working individually or as part of a team?	Effective teamwork & leadership depend on several key components, such as:	List ways to prevent safety hazards while working in the kitchen.	Peer Collaboration with checklist	Team building	11.2.6.C Classify the components of effective teamwork and leadership

	empower individuals to manage the challenges of living and working in a diverse, global society		cooperation, communication, collaboration, and compromise.				
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	What actions can a person take to be safe in the kitchen?	practice appropriate procedure in the kitchen to prevent accidental injury	Demonstrate appropriate procedure in the kitchen to prevent accidental injury	Kitchen Safety PowerPoint Guided notes	Sanitation Cross-contamination Abdominal trust	11.3.3.B Describe personal hygiene techniques in food handling (e.g., hand washing, sneeze control, signs of food spoilage)
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness	What actions can a person take to be safe in the kitchen?	practice appropriate procedure in the kitchen to prevent accidental injury	Discuss food sanitation and safety principles necessary when working in the kitchen.	Kitchen Safety	Foodborne illness Contaminant Microorganism Bacteria Toxin	11.3.3.B Describe personal hygiene techniques in food handling (e.g., hand washing, sneeze control, signs of food spoilage)

	throughout the lifecycle at individual and societal level.						
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	What kinds of knowledge do you need to successfully prepare food?	different kitchen tools needed when preparing food that are designed out of need and make food preparation easier.	Identify, describe the function, and demonstrate the correct use of basic kitchen equipment.	Kitchen equipment	Work center Work triangle Universal design	11.3.3.B Describe personal hygiene techniques in food handling (e.g., hand washing, sneeze control, signs of food spoilage)
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	What kinds of knowledge do you need to successfully prepare food?	different kitchen tools needed when preparing food that are designed out of need and make food preparation easier.	Determine food, equipment, & supplies needed for menus.	Kitchen equipment and supplies	Dinnerware Flatware Open stock	11.3.3.B Describe personal hygiene techniques in food handling (e.g., hand washing, sneeze control, signs of food spoilage)

1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	What are the components of a recipe and why is it important to follow directions in a recipe?	Recipes are organized in a common way with a common language. Reading and following directions yield consistent results	List the parts of a recipe. Read, understand information, and follow directions in a recipe. Identify abbreviations used in a recipe for common measurements.	FOOD PREPARATION PROCEDURE Parts of a Recipe (volume, weight, ingredients, directions, safety precautions) The Language of a Recipe Abbreviations	Recipe Yield Cooking time Blend	11.3.6.F Analyze basic food preparation techniques and food handling procedures.
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	Why is it important for me to learn the units of measure and their relationships when preparing food?	Recipes are organized in a common way with a common language. Reading and following directions yield consistent results.	Identify units of measure commonly found in a recipe. Convert units of measure into corresponding equivalents. Apply knowledge of fractions when measuring ingredients for a recipe.	KITCHEN MATH Measurements Equivalents Fractions	Equivalents Fractions	11.3.3.F Identify components of a basic recipe (e.g., volume, weight, fractions, recipe ingredients, recipe directions, safety techniques).
1-2/45 min lessons	Families are the fundamental unit of	What are the advantages and disadvantages of working	Effective teamwork & leadership depend on	Demonstrate teamwork and leadership skills when working in	FOODS LAB EXPERIENCES Teamwork Collaboration		11.2.9.C Assess the effectiveness of the use of teamwork and

	society; strong families empower individuals to manage the challenges of living and working in a diverse, global society	individually or as part of a team?	several key components, such as: cooperation, communication, collaboration, and compromise	the foods lab. Evaluate the advantages and disadvantages of different roles when working in a group.	Time Management		leadership skills in accomplishing the work of the family
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## Unit 2 (Nutrition)

1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	How is food related to health and wellness?	People need to consume a variety of foods containing different nutrients to stay healthy.	Explain the relationship between good nutrition, health, and disease.	Nutrition and Health Food Groups	Nutrient Nutrition Malnutrition Deficiency disease	11.3.3.D Classify foods by food group within the food guide pyramid including the serving size and nutrient function within the body.
1-2/45 min lessons	Nutrition, eating habits and	What is the connection	Food choices relate to the health and	Classify different foods according to	Basic Nutrients MyPlate	Antioxidant Fortified food Carbohydrate	11.3.6.D Describe a well-balanced daily

	preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	between food and energy?	wellness of the individual.	their food group on MyPlate. Identify the basic nutrients.		Glucose Fiber Fat Fatty acid	menu using the dietary guidelines and the food guide pyramid. (MyPlate)
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	How do I interpret nutritional labeling?	Food supplies the energy our body needs for physical activity.	Distinguish between nutritious snacks and those considered empty calorie snacks. Plan and prepare nutritious snacks.	Portion Control Healthy Snacking	Digestion Absorption Metabolism	11.3.6.E Explain the relationship between calories, nutrient and food input versus energy output; describe digestion.
1-2/45 min lessons	Families are the fundamental unit of society; strong families empower	What are the advantages and disadvantages of working individually or as part of a team?	Effective teamwork & leadership depend on several key components, such as: cooperation,	Demonstrate teamwork and leadership skills when working in the foods lab. Evaluate the advantages and disadvantages of	FOODS LAB EXPERIENCES Teamwork Collaboration Time Management		11.2.9.C Assess the effectiveness of the use of teamwork and leadership skills in accomplishing the work of the family

	individuals to manage the challenges of living and working in a diverse, global society		communication, collaboration, and compromise	different roles when working in a group.			
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**Unit 3 (Breads)**

1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	What are leavening agents and how do they work?	Leavening agents are the ingredients in dough or batter that cause baked products to rise	List types of leavening agents. Describe the purpose/function of a leavening agent in a recipe. Explain how various leavening agents work.	LEAVENING AGENTS Types Purpose / Function Actions	Leavening agent	11.3.6.G Describe the physical, biological, and chemical changes that take place in food preparation.
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall	What do all quick breads have in common?	A quick bread uses chemical leaveners and contain 5 basic ingredients: flour, baking powder (and/or	Explain why some breads are classified as “quick breads”. List the basic ingredients used in all quick	Quick Breads Basic ingredients Leavening Agents	Batter Dough	11.3.9.G Analyze the application of physical and chemical changes that occur in food during

	health and wellness throughout the lifecycle at individual and societal level.		baking soda), eggs, fat (butter, margarine, shortening, or oil), and milk (or another liquid).	bread and describe their function.			preparation and preservation.
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	How does yeast cause baked products to rise?	Yeast is a living organism that is used as a leavening agent that causes baked products to rise through a chemical reaction called fermentation.	Defend yeast as a living organism. Identify the different types of yeast. Describe the process of fermentation and how this chemical reaction causes baked products to rise. Discuss the optimal conditions for fermentation.	Yeast Breads types of yeast fermentation optimal conditions	Yeast Gluten Fermentation	11.3.12.G Analyze the relevance of scientific principles to food processing, preparation and packaging
3-4/45 min lessons	Families are the fundamental unit of society; strong families empower individuals	What are the advantages and disadvantages of working individually or as part of a team?	Effective teamwork & leadership depend on several key components, such as: cooperation, communication,	Demonstrate teamwork and leadership skills when working in the foods lab. Evaluate the advantages and disadvantages of different roles	FOODS LAB EXPERIENCES Teamwork Collaboration Time Management		11.2.9.C Assess the effectiveness of the use of teamwork and leadership skills in accomplishing the work of the family

	to manage the challenges of living and working in a diverse, global society		collaboration, and compromise	when working in a group.			
<b>Unit 4 (Vegetables)</b>							
2-3/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	Why are vegetables important to a healthful diet?	Vegetables provide essential nutrients and need to be consumed daily	Explain why vegetables are nutritious. Identify the size of a serving of vegetables.	Nutrients of vegetables Recommended Daily Intake	Chlorophyll Carotene legumes	11.3.9.A Explain how scientific and technological developments enhance our food supply (e.g., food preservation techniques, packaging, nutrient fortification).
2-3/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and	How can I include vegetables in my diet on a daily basis?	Vegetables provide essential nutrients and need to be consumed daily	Identify different types of vegetables. Describe how we are able to get vegetables throughout the year.	Types of Vegetables Production of Vegetables	Flavones Anthocyanin Crisp-tender New potatoes	11.3.12.A Analyze how food engineering and technology trends will influence the food supply

	wellness throughout the lifecycle at individual and societal level.						
1-2/45 min lessons	Families are the fundamental unit of society; strong families empower individuals to manage the challenges of living and working in a diverse, global society	What are the advantages and disadvantages of working individually or as part of a team?	Effective teamwork & leadership depend on several key components, such as: cooperation, communication, collaboration, and compromise	Research and create a recipe using vegetables. Practice good table manners while eating a meal.	FOODS LAB EXPERIENCES Teamwork Collaboration Time Management		11.2.9.C Assess the effectiveness of the use of teamwork and leadership skills in accomplishing the work of the family
<b>Unit 5 (Fruits)</b>							
2-3/45 min lessons	Nutrition, eating habits and preparation choices impact overall	Why are fruits important to a healthful diet?	fruits provide essential nutrients and need to be consumed daily	Explain why fruits are nutritious. Identify the size of a serving of vegetables.	Nutrients of fruits Recommended Daily Intake	Berries Drupes Pomes Citrus fruits Melons Tropical fruit	11.3.9.A Explain how scientific and technological developments enhance our food supply (e.g., food

	health and wellness throughout the lifecycle at individual and societal level.						preservation techniques, packaging, nutrient fortification).
2-3/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	How can I include fruits in my diet on a daily basis?	fruits provide essential nutrients and need to be consumed daily	Identify different types of fruits. Describe how we are able to get fruits throughout the year.	Types of fruits Production of fruits	Underripe fruit Immature fruit Enzymatic browning Fritters	11.3.12.A Analyze how food engineering and technology trends will influence the food supply
1-2/45 min lessons	Families are the fundamental unit of society; strong families empower individuals to manage the challenges of	What are the advantages and disadvantages of working individually or as part of a team?	Effective teamwork & leadership depend on several key components, such as: cooperation, communication, collaboration, and compromise	Research and create a recipe using fruits. Practice good table manners while eating a meal.	FOODS LAB EXPERIENCES Teamwork Collaboration Time Management		11.2.9.C Assess the effectiveness of the use of teamwork and leadership skills in accomplishing the work of the family

	living and working in a diverse, global society						
<b>Unit 6 (Eggs)</b>							
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	Why are eggs part of a nutritious diet?	Eggs are a low calorie, nutritious, source of protein.	Explain why eggs are nutritious. Identify the different parts of an egg	Parts of an egg Egg nutrition	Candling	11.3.9.A Explain how scientific and technological developments enhance our food supply (e.g., food preservation techniques, packaging, nutrient fortification).
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle	How does an egg function in a recipe?	Eggs function in multiple ways in a recipe.	Describe the ways we are able to eat and prepare eggs. Discuss the physical, chemical, and biological changes that occur in eggs	Egg functions Egg preparation	Emulsion Coagulum Omelet Soufflé Meringue Weeping Beading Custard	11.3.12.A Analyze how food engineering and technology trends will influence the food supply

	at individual and societal level.			when they are cooked.			
1-2/45 min lessons	Families are the fundamental unit of society; strong families empower individuals to manage the challenges of living and working in a diverse, global society	What are the advantages and disadvantages of working individually or as part of a team?	Effective teamwork & leadership depend on several key components, such as: cooperation, communication, collaboration, and compromise	Prepare eggs in different ways. Use eggs in recipes to understand their many functions	FOODS LAB EXPERIENCES Teamwork Collaboration Time Management		11.2.9.C Assess the effectiveness of the use of teamwork and leadership skills in accomplishing the work of the family
<b>Unit 7 (Dairy)</b>							
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout	What are the nutrients in dairy products?	Dairy products are very nutritious	Compare the different forms of dairy products available in the marketplace.	Types of milk/dairy products Dairy food industry	Pasteurization Ultra-high temperature	11.3.3.A Know the production steps that a food travels from the farm to the consumer.

	the lifecycle at individual and societal level.						
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	What are the nutrients in dairy products?	Dairy products are very nutritious	Analyze the nutrients in dairy products.	Nutrients in dairy products	Homogenization Milkfat Milk solids	11.3.9.A Explain how scientific and technological developments enhance our food supply (e.g., food preservation techniques, packaging, nutrient fortification).
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	What forms of dairy can be purchased and how do they compare?	There are many forms of dairy products that can be consumed in different ways	Explain how yogurt is made and why it is nutritious.	Dairy product food preparation	Coagulate Curd Whey Unripened cheese Ripened cheese Process cheese Scum Curdling Scorching	11.3.12.B Evaluate the role of Government agencies in safeguarding our food supply (e.g., USDA, FDA, EPA and CDC).

1-2/45 min lessons	Families are the fundamental unit of society; strong families empower individuals to manage the challenges of living and working in a diverse, global society	What are the advantages and disadvantages of working individually or as part of a team?	Effective teamwork & leadership depend on several key components, such as: cooperation, communication, collaboration, and compromise	Prepare foods using different forms of dairy.	FOODS LAB EXPERIENCES Teamwork Collaboration Time Management		11.2.9.C Assess the effectiveness of the use of teamwork and leadership skills in accomplishing the work of the family
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**Unit 8 (Poultry)**

1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual	What nutrients are found in poultry?	Nutrients	examine poultry's nutritional value	Describe what nutrients are supplied by poultry		11.3.3.A Know the production steps that a food travels from the farm to the consumer.
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	and societal level.						
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	How do we handle poultry to avoid contamination?	Selection and preparation	explore types and forms of poultry	Describe the principles and methods for cooking poultry	Poultry Giblets	11.3.9.A Explain how scientific and technological developments enhance our food supply (e.g., food preservation techniques, packaging, nutrient fortification).
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	How can we use poultry for a variety of cooking methods?	Contamination and cross-contamination	learn how to store and prepare poultry properly and safely	Describe how to properly store poultry to maintain its quality		11.3.12.B Evaluate the role of Government agencies in safeguarding our food supply (e.g., USDA, FDA, EPA and CDC).
1-2/45 min lessons	Families are the fundamental	What are the advantages and disadvantages	Effective teamwork & leadership	Prepare poultry by moist and dry	FOODS LAB EXPERIENCES Teamwork		11.2.9.C Assess the effectiveness of the use of

	unit of society; strong families empower individuals to manage the challenges of living and working in a diverse, global society	of working individually or as part of a team?	depend on several key components, such as: cooperation, communication, collaboration, and compromise	cooking methods	Collaboration Time Management		teamwork and leadership skills in accomplishing the work of the family
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**Unit 9 (Beef)**

1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	What are some factors that affect your selection of a cut of meat?	What to look for when selecting meat.	examine beef's nutritional value	Describe what nutrients are supplied by beef	Meat Variety meats Beef Marbling Elastin	11.3.3.A Know the production steps that a food travels from the farm to the consumer.
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1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	How do we store beef cuts to maintain the quality?	How to store raw and cooked beef	explore types and forms of beef	Describe the principles and methods for cooking poultry	Wholesale cut Retail cut collagen	11.3.9.A Explain how scientific and technological developments enhance our food supply (e.g., food preservation techniques, packaging, nutrient fortification).
1-2/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	What factors determine how you will prepare the meat?	Methods for cooking meat	learn how to store and prepare beef properly and safely	Describe how to properly store beef to maintain its quality	Cooking losses	11.3.12.B Evaluate the role of Government agencies in safeguarding our food supply (e.g., USDA, FDA, EPA and CDC).
1-2/45 min lessons	Families are the fundamental unit of society;	What are the advantages and disadvantages of working individually or	Effective teamwork & leadership depend on several key	Prepare beef by moist and dry cooking methods	FOODS LAB EXPERIENCES Teamwork Collaboration		11.2.9.C Assess the effectiveness of the use of teamwork and leadership skills

	strong families empower individuals to manage the challenges of living and working in a diverse, global society	as part of a team?	components, such as: cooperation, communication, collaboration, and compromise		Time Management		in accomplishing the work of the family
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### Unit 10 (Sanitation and Organization)

2-3/45 min lessons	Nutrition, eating habits and preparation choices impact overall health and wellness throughout the lifecycle at individual and societal level.	How can I clean a kitchen properly and what equipment and products are needed?	A kitchen needs to be cleaned thoroughly to ensure proper sanitation	Discuss the importance of keeping a kitchen clean. Demonstrate proper cleaning technique and use of cleaning products while cleaning the classroom kitchens.	Kitchen clean up Sanitation, cleaning techniques	Sanitation Contamination Bacteria	11.3.3.B Describe personal hygiene techniques in food handling (e.g., hand-washing, sneeze control, signs of food spoilage).
2-3/45 min lessons	Responsible consumers use effective resource	How can you and your family reduce,	Some cleaning products are environmentally friendly	Name some environmentally friendly cleaning	Green living and the modern kitchen	Green living	11.1.12.F Compare and contrast the selection of

	management to accomplish individual, family, and community goals	re-use and recycle more?		products. Explain why it is important for people to use “green” cleaning products.			goods and services by applying effective consumer strategies.
2-3/45 min lessons	Families are the fundamental unit of society; strong families empower individuals to manage the challenges of living and working in a diverse, global society	Why is it important to know how to write and follow a recipe?	There is a technique to writing and following a recipe and cookbook	Compile and organize a cookbook containing recipes used in this course.	Create a cookbook	cookbook	11.2.12.A Justify solutions developed by using practical reasoning skills.