Moon Area School District Curriculum Map

Course: Art of Baking
Grade Level: 9-12
Content Area: FCS
Frequency: Semester

Big Ideas

1. After completion of this course elective, students will be able to recall, recite and demonstrate various techniques and exercises while executing numerous preparation and baking methods.
2. After completion of this course elective, students will be able to successfully collaborate with their peers to effectively execute lab procedures and standards to successfully complete various lab and group work activities.
3. After completion of this course elective, students will successfully reflect on the outcomes of their labs based on instructional material presented to them through PowerPoints, instructor made videos and demonstrations, readings and other course materials to continue to build and master baking skills and concepts.

Essential Questions

1. Why is important to learn safety and sanitation procedures and to apply these procedures in the FCS classroom?
2. Explain the importance of using proper utensils for the correct job. How are some utensils able to be used for multiple procedures?
3. Why is it important to be able to make proper adjustments to recipes?
4. Define the importance of using precise measurements in baking.
5. How can accurate changes be made to recipes by using the "Bakers Percentage"?
6. Describe the function of each ingredient that is used in baking. How can the product be positively and/or negatively affected by using the correct or incorrect amounts of ingredients?
7. Define different mixing methods and explain the importance of using the appropriate method.
8. What is it that make quick breads rise? Describe the process of incorporating leavening agents into your batter and how it causes the bread to rise.
9. What is the biscuit method and how does it work?
10. Describe the blending method and how it can affect the overall quality of the product.
11. What is the creaming method and how is the process achieved?
12. What make a yeast bread different from a quick bread?
13. Describe the process of preparing yeast breads.
14. How is fermentation important in affecting the flavor and texture of yeast breads?
15. What is proofing and why is it important in making yeast breads?
16. How does appearance of food affect how we eat? Does a food have to be visually appealing as well as tasty or do we rely on taste alone in deciding what we eat?
17. How can the density of a cake affect the type of icing that we use on the cake?

18. How do typical cake ingredients differ from those that we use in breads?
19. Define and differentiate shortened vs. un-shortened cakes and identify examples of each.
20. Describe the different types of icing. How does the desired product affect what type of icing that we use and when?
21. How can the amount of gluten in flour affect the overall quality of pie dough? Describe what type of flour should be used when making pies.
22. Describe the two types of pie dough. How does the way the pie dough is made determine what type of pie it is used for?
23. How can the type of pie determine how the pie has to be made in terms of assembling and baking?
24. Describe characteristics of cookies in terms of texture. How can cookies be made with different textures such as soft and chewy or crispy?
25. What are the different types of cookies that can be prepared?
26. How can the baking sheet that is used affect the outcome of the cookie? Explain why cooking times should be adjusted for a dark metal sheet compared to a shiny metal sheet?
27. What is a more accurate form of measuring scaling or measuring by volume and how can it effect the outcome of a product.
28. How is the knowledge that you learned in this course better able you to complete a recipe from scratch?
29. Define characteristics of a chosen recipe.

Primary Resource(s) & Technology:

- Textbook- *Guide to Good Food*, The Goodheart-Willcox Company, INC. Copyright 2006, *Culinary Essential*, McGraw-Hill company, copyright 2010
- Microsoft Teams, Student Laptops
- Teacher Guided PowerPoints
- Teacher Guided Notes
- Provided Recipes
- Recipe Ingredients
- Use of Kitchens including various kitchen tools/equipment/appliances

Pennsylvania and/or focus standards referenced at:

www.pdesas.org
www.education.pa.gov

Big Ideas/ EQs	Focus Standard(s)	Assessed Competencies (Key content and skills)	Timeline

EQ 1-3 B.I.-1-3	11.3.3.B 11.3.3.F 11.3.3.B 11.3.3.F 11.3.6.B 11.3.6.F 11.3.9.B	**Art of Baking Course Introductory Material** • Overview of course standards and materials • Review Syllabus and Course Overview o *PowerPoint* o *Introductions* **Safety, Sanitation & Foodborne Illness** • Apply knowledge to avoid kitchen accidents. • Apply knowledge to avoid food borne illness and other related effects on improper food handling. • Apply knowledge to successfully complete labs safely and efficiently. Describe personal hygiene techniques in food handling (e.g., hand wa signs of food spoilage). Identify components of a basic recipe (e.g., volume, weight, fractions, recipe directions, safety techniques).	3-4 weeks
EQ 1-3 B.I.-1-3	11.3.3.B 11.3.3.F 11.3.6.B 11.3.6.F 11.3.9.B	**Equipment, Appliances, Vocab, Reading a Recipe, Measuring and Equivalents** • Understand the importance of adjusting recipes. • Through cross-curricular teaching apply skills that can be used in math which deal with measuring and fractions. • In class cooking lab: Understanding the Recipe and Brownies	
EQ 1-3 B.I.-1-3	11.3.3.B 11.3.3.F 11.3.3.G 11.3.6.B 11.3.6.C 11.3.6.F 11.3.9.F	**Knife Skills, Prepping for Labs, Cooking in the classroom expectations, Review for Test One** • Knives • Knife safety • Cutting techniques • Knife skills demo • Preparing for cooking • In Class Cooking Lab – Quesadillas and salsa • **Introductory Unit Exam** Describe personal hygiene techniques in food handling (e.g., hand wa signs of food spoilage). Identify components of a basic recipe (e.g., volume, weight, fractions, recipe directions, safety techniques). Classify foods according to senses (e.g., taste, touch, smell, mouth fee Describe safe food handling techniques (e.g., storage, temperature co conditions that create a safe working environment for food production Analyze factors that effect food choices. Analyze basic food preparation techniques and food-handling procedu	
E.Q. 25-27 B.I.-1-3		**Unit 2: Cookies** Cookie Characteristics o Soft o Crisp o Chewy • Making Cookies o Mixing methods	1-2 weeks

		• Cookie types
		  ○ Drop cookies
		  ○ Rolled cookies
		  ○ Icebox cookies
		  ○ Molded cookies
		  ○ Bar cookies
		  ○ Pressed cookies
		• Baking cookies
		  ○ Cookie spread- cookie expansion during baking
		  ○ Carry-over baking- cookies continuing to bake after they have been taken out of the oven.
		• Storing cookies
		• Assessment:
		  ○ Cookie quiz
		  ○ Lab 1- Drop cookies Chocolate chip cookies
		  ▪ Utilization of the creaming method
		  ▪ Emphasis on using cookie scoops for uniformity
		  ▪ Lab reflection attached to recipe
		  ○ Lab 2- Rolled Sugar cookies
		  ▪ Utilization of the one stage method
		  ▪ Emphasis on difference in texture between “drop” and “rolled” cookie dough
		  ▪ Lab reflection attached to recipe
		  ○ Lab 3- Ability based cookie lab
		  ▪ Students will select labs ranging in degree of difficulty to include molded cookies, bar cookies, ice box cookies, and macrons
		  ▪ Emphasis on using cookie scoops for uniformity
		  ▪ Emphasis on uniform baking	

		▪ Lab reflection attached to recipe	
E.Q. 6-12 B.I.-1-3	11.3.3.F 11.3.6.B 11.3.6.F 11.3.6.G 11.3.9.B 11.3.9.G 11.3.12G	**<u>Unit 3: Quick breads</u>** • Baking Ratios o Pour batter o Drop batter o Soft dough o Stiff dough • Quick bread methods o Biscuit method o Blending method o Creaming method • Mixing o Importance o Undermixing o Overmixing • Leavening agents o Air o Steam o Carbon dioxide • Chemical leavening agents o Baking soda o Baking powder o Identifying the difference between each ingredient • General functions of ingredients o Flour o Liquid ▪ Milk ▪ Water ▪ Which ingredient is more superior and why? o Eggs ▪ Explain emulsifiers ▪ Temporary ▪ Permanent ▪ Liquid ▪ Structure o Sugar o Fat o Salt • Assessment:	1-2 weeks

		○ Lab 1- Blueberry muffins and/or other muffin recipes ▪ Utilization of the blending method ▪ Emphasis on proper mixing and not over mixing ▪ Lab reflection attached to recipe ○ Lab 2- Biscuits w/sausage gravy ▪ Utilization of the biscuit method ▪ Emphasis on proper mixing and not over-mixing ▪ Sausage gravy demonstration ▪ Explanation of a "roux" ▪ Emphasis on the advantage of creating seasonings ▪ Lab reflection attached to recipe ○ Lab 3- Ability based quick bread lab ▪ Students will select labs ranging in degree of difficulty to include simple quick breads, scones, and cream puffs ▪ Emphasis on usage of different leavening ▪ Emphasis on varying degrees of mixing ▪ Lab reflection attached to recipe	
E.Q. 5, 12-16 B.I.-1-3	11.3.3.F 11.3.6.B 11.3.6.F 11.3.6.G 11.3.9.B 11.3.9.G 11.3.12G	**<u>Unit 4: Yeast Dough Ingredients</u>** ○ Yeast ▪ Fresh or cake yeast ▪ Dry active ▪ Quick rise yeast	1-2 weeks

		• Yeast can be substituted by 2-1 or 1-2 ratios ▪ Yeast sensitivity to temperature • Appropriate temperature needed to activate temperature • Yeast dies at 138°F o Starters ▪ Mixture of basic ingredients to begin fermentation and development of flavor o Other ingredients • Regular Yeast Doughs- Varying levels of fat and sugar effect the texture o Hard dough o Soft/Medium dough o Sweet rich doughs • Rolled-In Fat Doughs- Higher degree of difficulty and most time consuming o Croissants o Danish pastry • Yeast Dough Preparation o Process can vary depending on commercial vs. home baking • Scaling ingredients o Measuring ingredients by volume for liquids and by weight for dry ingredients o Usage of the bakers percentage to change overall yield of the recipe o More accurate form of changing yields • Mixing and kneading o Mixing methods ▪ Straight dough ▪ Modified straight dough ▪ Sponge method o Mechanical process to develop gluten o Gluten provides elasticity and body to the dough o Proof of proper gluten development	

		▪ Dough should be tacky but not sticky ▪ Poke test ▪ Window pane test ▪ Consistency should resemble the feel of your earlobe • Fermentation o Conversion of yeast and sugar to alcohol to develop flavor and texture in yeast bread o Punching dough to release CO2 to and introduce O2 to allow fermentation to continue • Dividing dough • Rounding dough • Bench rest • Shaping dough • Panning dough • Final proofing • Baking o Dough turns to bread o Baking times dependent on: ▪ Dough type ▪ Dough richness ▪ Portion size ▪ Color ▪ Pan placement o Stage of baking ▪ Oven spring ▪ Structure develops ▪ Crust forms at 165°F ▪ Alcohol evaporates at 220°F o Test for doneness ▪ Color ▪ Thump Test • Assessment: o Lab 1- Italian bread ▪ Utilization of modified straight dough method ▪ Emphasis on proper mixing and kneading ▪ Lab reflection attached to recipe o Lab 2- NY Style Pizza	

		▪ Utilization of modified straight dough method ▪ Emphasis on proper mixing and kneading ▪ Lab reflection attached to recipe o Lab 3- Ability based yeast bread lab ▪ Students will select labs ranging in degree of difficulty to include but not be limited to cinnamon rolls, doughnuts, chocolate Babka wreath, and Danish ▪ Emphasis on baking different dough richness ▪ Emphasis on shaping ▪ Lab reflection attached to recipe **<u>Unit 5 Cakes:</u>** • Cake Ingredients o Strengthening of structure o Weakening of structure o Starch used for stabilization • Leavening of cakes o High fat cakes ▪ Chemical leavening ▪ Creaming air into fat pockets o Low fat cakes ▪ Leavened by air ▪ Creation of lighter texture • Types of cakes o Pound cake o Sponge cake o Angel food cake o Chiffon cake o High ratio layer cake • Mixing methods o Creaming method o Blending method o Sponge method o Angel food method o Chiffon method	1-2 weeks
E.Q. 16-20 B.I. 1-3	11.3.3.B 11.3.3.F 11.3.6.B 11.3.6.F 11.3.6.G 11.3.9.B 11.3.9.G		

		• Preparation method
		  ○ Coating of pans to prevent sticking
		  ○ Avoidance of overmixing (theme stressed throughout all units)
		  ○ Equal filling of pans and avoidance of over filling the pans
		• Scaling batter
		• Cake pan choices
		• Baking techniques:
		  ○ The importance of the following items:
		  ▪ Preheating the oven
		  ▪ Leveled shelves
		  ▪ Circulation of air
		  ▪ Leaving the door closed
		  ▪ How to determine for doneness
		  ○ Cooling cakes
		  ○ Icing and storage
		  ○ Types of buttercreams
		  ▪ Simple
		  ▪ French
		  ▪ Italian
		  ▪ German
		  ▪ Swiss
		  ○ Royal icing
		  ○ Icing of cakes
		  ▪ Choose appropriate icing for the right cake
		  ▪ Uniform appearance
		  ▪ Absence of crumbs
		  ○ Storing and serving
		• Assessment:
		  ○ Lab 1- Pound cake
		  ▪ Utilization of the creaming method
		  ▪ Emphasis on proper mixing
		  ▪ Lab reflection attached to recipe
		  ○ Lab 2- Chocolate cup cake lab
		  ▪ Utilization of the blending method
		  ▪ Emphasis on mixing, baking times, and how the	

		utilization of ingredients can elevate certain flavors o Lab 3- Ability based cake lab ▪ Students will select labs ranging in degree of difficulty to include but not be limited to angel food cake, pumpkin roll, lemon chiffon cupcakes, and high ratio layer cake. ▪ Emphasis will be on different mixing methods and leavening agents. ▪ Lab reflection attached to the recipe	2-3 weeks
E.Q. 16	11.3.3.B 11.3.3.F 11.3.6.B 11.3.6.F 11.3.6.G 11.3.9.B 11.3.9.G	**<u>Unit 6 Cake decorating</u>** • Students will watch two cake decorating basics videos made by the Wilton school or a video comparable to the ones we currently own that will describe basic decorating techniques. • Videos will be reinforced by the instructor to include the following information: • Students will watch two cake decorating basics videos made by the Wilton school or a video comparable to the ones we currently own that will describe basic decorating techniques. • Videos will be reinforced by the instructor to include the following information: o Tools and equipment: ▪ Couplers ▪ Featherweight bags ▪ Angled spatulas ▪ Turn tables ▪ Cake boards ▪ Stencils ▪ Icing combs ▪ Cake pans • Square 9x9 • 9 inch round	

		• Rectangular 13x9 • Specialty Shaped pans ○ Icing ▪ Simple buttercream ▪ Fondant ▪ Rice treats ▪ Gels and dyes ▪ Miscellaneous ○ Basic techniques ▪ Dirty icing ▪ Dots ▪ Stars ▪ Balloons ▪ Zig-zag border ▪ Zig-zag puff ▪ Hearts ▪ E-swirl ▪ Drop flowers ○ Assessment ▪ Students will take part in two assessments for this unit. The first assessment will be scored based on appearance but not graded. It will emphasize the importance of the techniques that they have practice and identify their strengths for assessment two. ▪ The second assessment will be a group project that where the students will create a one of a kind cake for the art of baking cake competition where students will be judged and scored based on creativity, teamwork, and overall appearance of their cakes.	1-3 weeks
E.Q. 6,7,21-23 B.I.1-3	11.3.3.B 11.3.3.F 11.3.6.B 11.3.6.F	**<u>Unit 7 Pies</u>** • Basic Pie dough	

	11.3.6.G 11.3.9.B 11.3.9.G	○ 3-2-1 Ratio ▪ Flour ▪ Liquid ▪ Fat ○ Gluten development- certain flours are used for certain recipes because of gluten content within flour. Overmixing of dough effects the final texture • Ingredients ○ Pastry flour- correct gluten levels ○ Vegetable shortening- creates perfect flaky pie crust ○ Liquid ○ Salt- importance in baking is to help elevate sweetness by balancing the flavor • Dough types ○ Flaky- fat not fully incorporated ○ Mealy- more fully incorporated • Crust types ○ Single ○ Double • Mixing of dough ○ Avoid overmixing ○ Importance of mixing by hand ○ Sifting of flour and salt ○ Correct fat size ○ Utilization of cold water ○ Resting of dough in refrigerator • Scaling dough ○ 7 oz for top crust ○ 8 oz for bottom crust • Fluting and panning ○ Before rolling dust the surface and rolling pin with flour ○ Roll dough to half inch thickness in all directions ○ Roll dough around the rolling pin and unroll into pan ○ Fluting- “u” and “n” like indentations made by the thumb and fore finger to help the pie adhere to the pan for baking. Also decorative. • Blind baking	

		• Pie fillings and pie types
		  ○ Cooked fruit filling
		  ○ Types of starches to thicken the fillings
		  ○ Cream pies
		  ○ Chiffon pies
		  ○ Custard pie
		• Assessment:
		  ○ Lab 1- Fruit pie
		  ▪ Utilization of flaky dough and two crust pie
		  ▪ Emphasis on proper mixing and not overworking the dough
		  ▪ Lab reflection attached to recipe
		  ○ Lab 2- Cream pie
		  ▪ Utilization of flaky dough, one crust pie, and cornstarch to make a slurry and cream filling as well as blind baking.
		  ▪ Emphasis on proper tempering and proper blind baking techniques
		  ▪ Lab reflection attached to the recipe
		  ○ Lab 3- Custard and savory pie lab
		  ▪ Utilization of both single and two crust pies, as well as, flaky and mealy dough
		  ▪ Emphasis will be on not overworking the dough.
		  ▪ Lab reflection attached to the recipe
		
		<u>Final Assessment</u>
		
		Students will demonstrate knowledge obtained from the course in one the two following assessments based on time to complete the art of baking:
			1-4 weeks

		1. Independent or partnered demonstrations where students will demonstrate how to make a recipe of their choosing in front of the class to not be less than 10 minutes, but not to exceed a class period in length. 2. Group lab that will have the students to recreate a recipe from memory that was completed during the course.	
