Science in CTE Lesson Plan

Lesson Title: Homemade Mayonnaise with whole egg substitute	**Length: 1 blk. or 2-45 min.**	**Grade Level: HS.**
Career Cluster and Pathway: Hospitality & Tourism	**Unit of Study: Salad Dressings**	**Course: Foods**

National FCS Standards:

8.5.4: Apply fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating and holding a variety of foods.
8.5.8 Prepare various salads, dressings, marinades, and spies using safe handling and professional preparation techniques.
9.5.3: Prepare food for presentation and assessment.
9.5.6: Conduct sensory evaluations of food products.
9.6: Demonstrate food science, dietetics, and nutrition management principles and practices.

Lesson Objective(s) Demonstrate temporary and permanent emulsions.	
Material Required:	See lab sheet- ingredients need to be at room temperature
Time Required:	2-3 (45-50 mins.) class periods
Essential Question(s): Which ingredient in mayonnaise causes water and oil to remain mixed forming a permanent emulsion?	
Lesson Overview: Preparation of temporary and permanent emulsions	
Introduction	**Do oil and water mix?** http://www.youtube.com/watch?v=l6IsKNCP4nc **Show 2:53**
Pre-assessment	Venn diagram- temporary and permanent emulsion
Activity 1	Teacher demonstration: Homemade Mayonnaise
Activity 2	Video segment:" Emulsions" use video worksheet questions. **Food Science Experiments**-Learning Zone Express.
Activity 3	Homemade Mayonnaise Lab- Prepare Buttermilk, creamy Italian or Thousand Island dressing
Activity 4	Temporary emulsion- Herbal Vinaigrette
Evaluation/Assessment	Emulsions-video worksheet questions. Lab report
Sources	"What Science Has to do With Cooking" **Co-Ed,** April.1985. pg. 21. **Food Chemistry: I Second that Emulsion-IFT-pg.6-7. www.ift.org** **Healthy Cuisine for Kids-Culinary Manual- Emulsions, pg. 12.**National Food Service Management Institute.
Additional Notes	http://www.foodnetwork.com/mayonnaise/video/index.html 2:12 Alton Brown video

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