

IN-SERVICE EDUCATION PROJECT

RESULTS OF THE AVON HIGH SCHOOL TASTE TEST

Summer Yule

DIET 4415

IN-SERVICE EDUCATION

RESULTS OF THE AVON HIGH SCHOOL TASTE TEST

Goals of the Program

An in-service education meeting was held on March 14, 2018 at the Board of Education in Burlington, CT. A total of 4 employees of the Region 10 public schools were in attendance at this meeting. The goals of this program included:

- To name the winner of the March 1, 2018 taste test which was held at Avon High School
- To discuss the nutritional composition of the taste test winner
- To identify the fruit which the children would most like to see as a side served with this meal

For an in-depth financial rationale covering why the taste test was held, please refer to my ROI project. In short, the Food Service Director was looking for an item that would be as well-liked by students as the French toast sticks, which were temporarily unavailable to order. The Food Service Director decides on the menu for a total of 13 schools in the Region 10, Avon, and Canton public school districts.

SMART Objectives

- By the end of the meeting, 100% of participants will be able to name the winner of the Avon High School taste test.
- By the end of the meeting, at least 75% of participants will be able to identify one negative aspect of the taste test winner, as compared to the French toast bake.
- By the end of the meeting, at least 75% of participants will be able to identify the fruit which children would most like to see served as a side with this meal.

Means of Implementation and Program Overview

We held an informal meeting in a conference room in the Board of Education building. I used visual and auditory learning methods, talking to participants about the information provided on the colorful handouts which I created. A general overview of the program was provided on the handouts, and samples of all handouts are available below. Here are some additional points covered which I did not include on the program overview:

PRODUCTS TESTED:

- 1. Dutch Waffle¹ (J&J Snack Foods): This 51% whole grain product, which bears an uncanny resemblance to a funnel cake, was a Food Service Manager's top choice.
- 2. Belgian Waffle
 Sticks² (Krusteaz): This
 100% whole grain
 product was selected by
 the Food Service
 Director. It has the
 highest cost per meal.

3. Buttermilk Pancakes³

(BakeCrafters): Our final contender was suggested by a student at AHS. The kitchen staff are concerned that this 51% whole grain product will dry out on the serving line.

- Though both web and paper surveys were provided to students taking the taste test, only 5 students used the web survey (mostly my son and his friends ⓐ). I was told that this is because it was difficult finding the web address to access the survey.
 - One student suggested that for future taste tests, we should use a QR code that students can scan, so that the survey could be more easily completed by phone.
- I went over why the % of saturated fat on the nutrition label for the Dutch waffle is higher than the % of saturated fat when the Dutch waffle is incorporated into the school lunch meal.
 - In short, the label lists the percentage of 20g of saturated fat that one serving of the product provides.
 - The 20g is used because the Dietary Guidelines for Americans recommends eating <10% of total calories from saturated fat, and 20g of saturated fat,180 kcal, is equivalent to 9% of the total calories in a 2000 kcal/day diet.
 - My nutrient analysis for the Dutch waffle as a component of the school lunch meal looks at the percentage of calories in the entire NSLP meal that come from saturated fat.
- I recommended keeping other components of the meal low in saturated fat. The meal I created with the Dutch waffle has 10% of calories from saturated fat.
 - The meals served in the NSLP must average out to <10% of calories from saturated fat in a week, so this meal should be able to fit into the weekly plan as long as other meal components are not added which could bring the percentage of saturated fat in this meal up too high.
- Additionally, I warned participants of the danger of misinformation being spread on the web, when concerned parents are not familiar with the stringent requirements of the NSLP.



- A parent blogger of a student at a school in Georgia where the Dutch waffle was served posted a complaint that the school was serving her child fried dough, and her complaint went viral.⁴
- The Dutch waffle was covered in a large amount of powdered sugar in the photo posted (at left). The Food Service Director here plans to avoid making the product look like fairground food by topping it with a warm fruit compote instead.
- O The parent blogger questioned the claim that the Dutch waffle contains whole grains, and she wrongly stated that the first ingredient in the product was vegetable oil. Commenters continued to fan the flames with additional misinformation, such as that the product was fried.
- I provided each of the participants with a nutrition information sheet on the Dutch waffle, so that they would have the correct information on the product, if questioned.
- Finally, it was decided in the meeting that this product would not be appropriate for the elementary school students. It is too large to fit into the NSLP requirements for this age group, and the parents are more likely to find it controversial as a lunch choice.
 - The FSD decided that the elementary students can have pancakes (batch cooked, to prevent drying out on the line) on the day the older students have the Dutch waffle.

Samples of Handouts Used (next 6 pages)



Overview of Program

Presenter: Summer **Date:** March 14, 2018



- Name the winner of the taste test held on March 1 at Avon High School
- Identify the fruit the children would most like to see served as a side with this meal
 - o Discuss how it fits into overall nutritional composition of meal
- Discuss the nutritional composition of the taste test winner
 - NSLP meal equivalent components
 - Sodium content
 - o Calories
 - Saturated fat
- Examine other negative and positive aspects of this meal
 - Cost per meal
 - Labor

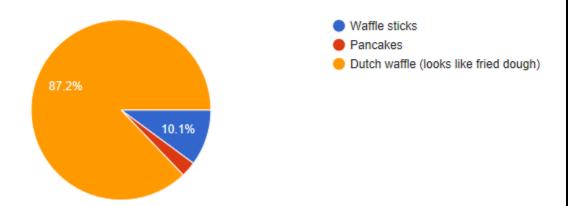


• Taste test winner will be incorporated into cycle menu starting April 2

Avon High School Taste Test Results

Which item would you most like to see on the menu?

109 responses

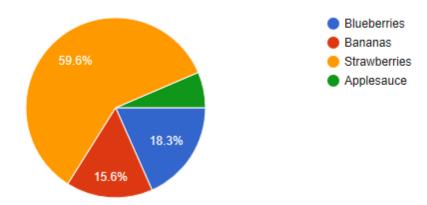


- 125 responses received (120 paper surveys, 5 online responses)
- 7 responses deleted because a single entrée not chosen; 6 chose multiple winning entrées, 1 left survey blank and wrote "They were all terrible"
- Additional 9 responses deleted because student only voted for the entrée and either chose multiple responses or no response to rest of survey
 - o 8 of these students picked Dutch waffle; 1 chose waffle sticks
- Of 109 surveys remaining, **Dutch waffle was clear winner with 87% of votes**



Which fruit should we serve it with?

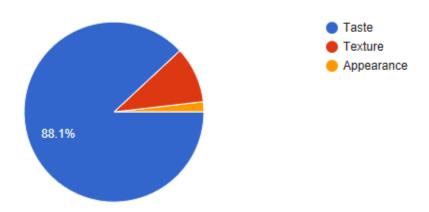
109 responses



- Nearly 60% of students would like strawberries to be served with this item
- 63% of the students who voted for Dutch waffle voted for strawberries
- Blueberries came in second, with about 18% of votes

Why did you like it?

109 responses



- Of the 109 responses recorded, **88% chose taste** as their main reason for choosing the entrée.
- 34 of these students chose 2 to 3 reasons for picking the entrée, but taste was always a reason chosen (and these responses were recorded as taste)

Potential Composition of Meal



Dutch Waffle and Sausage Meal Nutrition:

	Calories	Grain Equiv. (oz.)	M/MA Equiv. (oz.)	Fluid Milk (cup)	Fruit (cup)	Vegetable (cup)	Sodium (mg)	Sat. Fat (% of kcal)
Dutch Waffle + 4 Sausages	460	2	2	0	0	0	890	14%
1% Milk, 1 cup	110	0	0	1	0	0	130	12%
Strawberries, 1 cup	78	0	0	0	1	0	4	0%
Piknik Pancake Syrup, 2T	85	0	0	0	0	0	5	0%
Meal Totals	733	2	2	1	1	0	1029	10%
H.S. daily req. per lunch	750-850	2 (10-12/wk)	2 (10-12/wk)	1	1	1	≤1420	<10
M.S. daily req. per lunch	600-700	1 (8-10/wk)	1 (9-10/wk)	1	1/2	3/4	≤1360	<10

• For middle school, serve with 3 sausage links (not 4) for the following meal totals: 693 calories, 1.5 oz. M/MA, 894 mg sodium, 9.7% sat. fat.

French Togst Bake Meal Nutrition:

	Calories	Grain Equiv. (oz.)	M/MA Equiv. (oz.)	Fluid Milk (cup)	Fruit (cup)	Vegetable (cup)	Sodium (mg)	Sat. Fat (% of kcal)
Per Serving (1/30)	352	2	3.2	0	0	0	503	9%
1% Milk, 1 cup	110	0	0	1	0	0	130	12%
Strawberries, 1 cup	78	0	0	0	1	0	4	0%
Piknik Pancake Syrup, 2T	85	0	0	0	0	0	5	0%
Meal Totals	625	2	3.2	1	1	0	642	7%
H.S. daily req. per lunch	750-850	2 (10-12/wk)	2 (10-12/wk)	1	1	1	≤ 1420	<10
M.S. daily req. per lunch	600-700	1 (8-10/wk)	1 (9-10/wk)	1	1/2	3/4	≤ 1360	<10

Dutch Waffle Meal Advantages:

- © Students indicated that they find this item highly palatable
- Solution
 Lower labor to prepare
- © Does not need to be prepared ahead, lower potential food waste
- Anticipated increase in sales
- (3) Student happiness, because product looks like a funnel cake

Dutch Waffle Meal Disadvantages:

- 😕 **Higher sodium** than French Toast Bake
- Higher calories and saturated fat than French Toast Bake (but both meals can fit within NSLP guidelines)
- Product is too large for elementary meals, so may need to either cut the product in half, or serve waffle sticks instead
- Higher food costs (\$1.24/serving for Dutch waffle/4 sausage links versus \$1.06/serving for French Toast Bake)



Nutrition Facts

Serving Size Serving Per Container 48

Amount Per Serving	
Calories 300	Calories from Fat 120
	% Daily Value
Total Fat 13g	20%
Saturated Fat 3g	15%
Trans Fat 0g	
Cholesterol 20mg	7%
Sodium 350mg	15%
Total Carbohydrates 43g	14%
Dietary Fiber 3g	12%
Sugars 12g	

Protein 4g

Vitamin A	0%
Vitamin A	0%
Vitamin C	0%
Calcium	4%
Iron	10%

* Percent Daily Values are based on a 2000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.

	Calories	2200	2700
Total Fat	Less than	120g	180g
Saturated Fat	Less than	25g	65g
Cholesterol	Less than	50mg	70mg
Sodium	Less than	10mg	15mg
Potassium	Less than	Omg	Omg
Total Carbohydrate		200g	270g
Dietary		33g	76g

Storage/ Handling:

Keep Frozen (0° F or below). Shelf life up to one year when stored properly.

Preparation Instruction:

Conventional Oven - 1) Preheat oven to 450°F.* 2) Remove frozen product from case and place on tray, then heat for 3-4 minutes.* 3) Sprinkle with confectioner's sugar or any other topping. Fryer - 1) Preheat fryer to 375° F.* 2) Remove frozen product from case and place in fryer for 30 seconds.* 3) Sprinkle with confectioner's sugar or any other topping. * Convection Oven - 1) Preheat oven to 325F 2) Place on low fan if possible 3) From frozen, bake for 6 1/2 minutes 4)Sprinkle with confectioner's sugar or any other topping. * Heating times and temperatures may vary.

Dutch Waffle 51% Whole Grain 5"/48ct.

MANUFACTURER'S PRODUCT CODE: 4521

Ingredients:

WHEAT FLOUR (WHOLE WHEAT FLOUR, ENRICHED WHEAT FLOUR [FLOUR, NIACIN, IRON, THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID]), SOYBEAN OIL, WATER, SUGAR, CONTAINS 2% OR LESS OF: ARTIFICAL FLAVOR, CELLULOSE GUM, DEXTROSE, EGG YOLK, LEAVENING (SODIUM ACID PYROPHOSPHATE, BAKING SODA, MONOCALCIUM PHOSPHATE), MONO AND DIGLYCERIDES, NONFAT MILK, SALT, SOY FLOUR.

Allergen Information:

Contains: Eggs, Milk, Soy Beans, Wheat

Kosher Type:

OU - DAIRY

Child Nutrition Statement:

The listed serving size contains 32g creditable grains of which 16.32g are whole grains. This provides 2 servings of breads/grains under the Child Nutrition Program using the 16g calculator.

Product Specifications:

UPC	SCC/GTIN	Case	Pack
073321045210	10073321045217	6	8

Case Dimensions								
Case Length	Case Width	Case Height	Case Cube	Net Weight (Lbs)	Gross Weight (Lbs)			
15.375	11.125	10.625	1.0517	8.5716	9.4839			

	Pallet Dimensions	
Pallet Tier	Pallet High	Pallet Count
10	7	70

I certify that the nutritional information contained on this page is true and correct.

Kirsten Leo Research and Development Manager

J&J Snack Foods Corp. 6000 Central Highway, Pennsauken, NJ 08109 • (800) 486-9533 x6140 • www.jjsnack.com

03/01/2018

Cost Analysis

We held the 30-minute in-service presentation in an empty conference room, so there were no facility costs associated with the meeting. Holding in-service meetings is not generally associated with additional personnel costs, since the time that employees spend at these meetings is worked into their day. The cost of the materials that were used for the in-service meeting was \$3.84. This is what it cost me to make 12 copies of the handouts, from my printer at home. Since there ended up being four participants, this breaks down to \$0.96 per participant.

If I consider all the costs associated with holding the taste test, which was held to procure the information which was presented at the in-service, the per-learner cost becomes quite a bit higher.

Item	Price	per case	Quantity per case	No. cases ordered	Total	
Pancakes	\$	15.86	144	2	\$	31.72
Waffle Sticks	\$	48.79	216	2	\$	97.58
Dutch Waffle	\$	28.10	48	3	\$	84.30
Pancake syrup	\$	18.94	4	0.125	\$	2.37
Foam plates, 6"	\$	44.79	1000	0.15	\$	6.72
Copies of Survey	\$	0.01	1	100	\$	0.50
Copies of Handouts	\$	0.04	1	96	\$	3.84
Plastic Cups	\$	22.98	2500	0.06	\$	1.38
				Cost of events =	\$	228.40

Adding in the cost of all materials used in the AHS taste test (food items, cups for syrup, disposable plates, and copies of paper surveys) the total cost of the in-service was \$228.40, or \$57.10 per learner. There was no additional labor cost associated with the AHS taste test, but the Food Service Manager at AHS told me that she had to be extra conscious of her time in order to get all of the extra food prepared. For instance, she made sure to get all the taco meat that she needed cooked the afternoon before. The taste test was held in the AHS cafeteria during all three lunch waves, so extra facility space was not needed. The kids seemed to love this event, and the survey provided some really great information for the lunch menu, so I believe that the money was well spent. The table above is also provided on the second sheet of the attached Excel document.

Evaluation Tool for Learner (with results)

4. No drawbacks (1, 25% of participants)

In-Service Training Quiz

for participants of food service managers' meeting

Y	ur Nan	ne:
Da	ite: Mai	rch 14, 2018
Ins	structio	ons: Please circle the correct answer following each question. Good luck!
1)	Which	item won the taste test held on March 1 at Avon High School?
	1.	Dutch waffle (4, 100% of participants)
	2.	French toast stick
	3.	Waffle stick
	4.	Pancake
2)	Which	n NSLP meal components does this taste test winner provide, when served with 4 sausage
	links?	
	1.	3 oz. grain, 2 oz. M/MA
	2.	2 oz. grain, 2 oz. M/MA (2, 50% of participants)
	3.	2.25 oz. grain, 2 oz. M/MA (2, 50% of participants)
3)	Which	n fruit did the children want served with the taste test winner?
	1.	Blueberries
	2.	Bananas
	3.	Apple sauce
	4.	Strawberries (4, 100% of participants)
4)	What	is one negative aspect of the taste test winning meal?
	1.	More labor to make it than the French toast bake
	2.	Higher sodium than the French toast bake (3, 75% of participants)
	3.	The kids dislike the appearance

Thank you!

Critique of Learner Evaluation

I created a simple quiz to evaluate whether the objectives of the in-service were met. The objectives and their results were:

- By the end of the meeting, 100% of participants will be able to name the winner of the Avon High School taste test.
 - This objective was met. For guestion one, 100% of participants named the Dutch waffle.
- By the end of the meeting, at least 75% of participants will be able to identify one negative aspect of the taste test winner, as compared to the French toast bake.

 This objective was also met. For question four, 75% of participants were able to identify that the Dutch waffle meal has a higher sodium content than the French toast bake meal.
- By the end of the meeting, at least 75% of participants will be able to identify the fruit which children would most like to see served as a side with this meal.

 The final objective was met as well. For question three, 100% of participants identified strawberries as the fruit which the children would most like to see served with the meal.

All objectives were met, and I feel that the quiz was effective to assess learning. I noticed that both of the questions where I had provided significant visual information (in the form of a pie chart) received a 100% correct response rate, so that may be a good way to convey data. I think that if I could change one thing about this learner evaluation, I would alter question 2, which only had a 50% correct response rate. This question was probably confusing, because I spent a bit of time talking about the meal equivalents for both the French toast bake meal and the Dutch waffle meal, and I imagine the numbers might have become a blur. This question was not attached to a SMART objective, but I wanted to test it out. In the future, if I wanted to ask a question like this again, I might add some stronger visual information in the handout about the 2 oz. grain equivalent in the Dutch waffle, instead of keeping the information hidden away in the table.

Professional Staff Evaluation of Presenter (with results)

In-Service Training Evaluation Form

for participants of food service managers' meeting

Date: March 14, 2018

Presenter: Summer

Instructions: Please indicate your level of agreement with the statements listed below.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The objectives of the training were clearly defined.	3 (75%)	1 (25%)	0	0	0
2. Participation and interaction were encouraged.	4 (100%)	0	0	0	0
3. The topics covered were relevant to me.	4 (100%)	0	0	0	0
4. The content was organized and easy to follow.	4 (100%)	0	0	0	0
5. The materials distributed were helpful.	4 (100%)	0	0	0	0
6. This training experience will be useful in my work.	1 (25%)	1 (25%)	2 (50%)	0	0
7. The presenter was knowledgeable about topics covered.	4 (100%)	0	0	0	0
8. The presenter was well prepared.	4 (100%)	0	0	0	0
9. The training objectives were met.	3 (75%)	1 (25%)	0	0	0
10. The time allotted for the meeting was sufficient.	4 (100%)	0	0	0	0

11. What did you like most about this in-service presentation?

See comments for questions 11 and 12 on next page

12. Please share other comments or expand on previous responses here:

Thank you for your feedback!

Comments

11. What did you like most about this in-service presentation?

- "Learned about the nutritional content of a school lunch. Also, nice to see the students had a choice for lunch product and a voice."
- "Very informative and interesting to learn the differences between products."
- "Very informative, helps make my decision."
- "The information presented about the winning item."

12. Please share other comments or expand on previous responses here:

- "Great job"
- "More lunch taste tests to determine lunch menus would be great." Commenter also said I did a nice job, and wished me luck (3)
- "A lot of thought put into the presentation. Great job"
- "Very well presented. Handouts excellent."

Self-evaluation

The intended audience for this in-service was the Food Service Manager overseeing each of the 13 schools which make up the Region 10, Avon, and Canton school districts. Due to snow, the original meeting date of March 8 was cancelled, and the date of the rescheduled meeting, March 13, was cancelled as well. As the end of my rotation approached, it was decided that the in-service would be held with a smaller group of employees in Region 10. One mistake I made was making the copies of the handouts several days in advance. I ended up wasting paper, since I did not need one dozen copies of everything for the much smaller group. An additional benefit to waiting until the last minute to make copies is that it would have allowed me to tailor the presenter evaluation form to be more appropriate to my last-minute audience. I would have changed question 6 to "This training experience will be useful to my work, or to my personal knowledge base." A couple of the attendees did not work directly with the staff in the kitchen. I knew that at least one of the participants does have children in the schools, so hopefully she found this information on school lunches personally informative and interesting, even if it does not have a direct application to her work. As a parent, I have enjoyed learning more about the school lunch program. I have noticed that other parents start asking me questions about the lunch programs in their schools, once they learn what I am doing in my current rotation. So, I think there is some interest in this topic in the wider population.

I liked the suggestion by one commenter that we should be doing more taste tests in the schools to help determine lunch menus. The kids had a fabulous time at our taste test and would love to have more input regarding the menu in the future, I am sure. The biggest issue that I had regarding the taste test survey (as one can see from the handouts) is that kids were choosing *too many* of the options. They liked *all* of the items we served, or they said they enjoyed the taste, texture, *and* appearance of the products. In the future I would more clearly communicate that I would like only one response per question (to help reduce the time I needed to spend cleansing the data), but I thought their positivity was really wonderful. What a great way to build enthusiasm for the school lunch program!

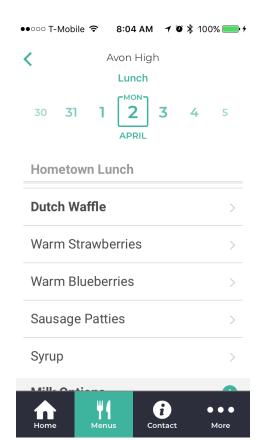
Next Steps Based on Effectiveness of this Program

The taste test winner (J&J Snack Foods Dutch waffle) will be served on the fourth Monday of the updated five-week cycle menu in the middle schools and high schools. The first date that it will be served is April 2. Based on the results of my learner evaluation, employees of Region 10 will be familiar with this new product when it arrives.

Bibliography

- 1. J&J Snack Foods. 51% Whole Grain Dutch Waffle. http://jjsnackfoodservice.com/our-products/funnel-cake-churros/dutch-waffle/. Accessed February 25, 2018.
- 2. UniPro Foodservice Inc. Krusteaz Premium Whole Grain Belgian Waffle Sticks 0.77oz. http://www.fsenet.biz/Reports/Export?GTIN=10686151403333&CODE=UNIPROGOLDFOOD. Accessed February 25, 2018.
- 3. UniPro Foodservice Inc. Pancakes, Whole Grain, Wholesome Choice, Buttermilk, Bulk, 4". http://www.fsenet.biz/Reports/Export?GTIN=00737410147505&CODE=UNIPROGOLDFOOD. Accessed February 25, 2018.
- 4. Licata E. Wellness Blogger Calls Out School for Serving Funnel Cakes for Breakfast. http://www.mommyish.com/wellness-blogger-calls-out-school-for-serving-funnel-cakes-for-breakfast/. Accessed March 14, 2018.

Finalized Menu





(A photo of the actual lunch as served.)