

## 2009 4-H Food, Nutrition and Food Science Contest



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### Purpose:

This event is designed:

1. To support the county 4-H food and nutrition program including all aspects of the Extension Tracks Nutrition Program.
2. To broaden the 4-H interaction experiences of youth and adults from across the Commonwealth in nutrition and food science.
3. To challenge 4-H member skills and knowledge in food, nutrition and food science.
4. To recognize 4-H members who demonstrate abilities in food, nutrition and food science.
5. To better acquaint 4-H members with the faculty, services and facilities of The Pennsylvania State University.

### Objectives:

The contest will provide an opportunity for:

1. 4-H members to further their learning, decision making, goal setting and teamwork skills.

2. 4-H members to demonstrate their knowledge in the settings of a competitive contest.
3. 4-H members to learn of careers and opportunities in the dynamic areas of food, nutrition and food science.

**Eligibility:**

1. Participants must be at least 13 years of age and should not have reached their 19<sup>th</sup> birthday as of January 1 of the current year.
2. Participants must be currently enrolled in 4-H food and nutrition, or in a food science-based or food related 4-H project.
3. Participants are to participate as a team of either three or four members. Individuals may participate but will be randomly grouped for some sections of the educational experience for scoring.

**Contest Organization and Educational Experience:**

The contest will be based on the member's knowledge of food labeling, food handling and safety, and knowledge of basic food nutrients. In addition to evaluation of knowledge, the member will also participate in a food product development event that will require decision making, goal setting and teamwork skills.

**Awards:**

1. Members of the first place team will be awarded plaques.
2. The individual with the highest overall score in the contest will be awarded a plaque
3. The team placing first and the individual with the highest overall score will be announced at the Recognition Assembly during Penn State 4-H Achievement Days.
4. Team ribbons will be awarded to a maximum of ten teams
5. Merit ribbons will be awarded to participants ( 33% blue, 33% red, 33% white)

**References:**

Pennsylvania 4-H Food and Nutrition Project Books and key nutrient study sheet

<http://www.cfsan.fda.gov/~dms/foodlab.html>

<http://www.fightbac.org/content/view/7/8/>

[http://www.fsis.usda.gov/is\\_it\\_done\\_yet/](http://www.fsis.usda.gov/is_it_done_yet/) (There are underscores between the words.)

<http://www.umaine.edu/NSFGK-12/images/PDFs/oreo.pdf>- triangle taste test lesson

<http://labs.ansci.uiuc.edu/meatscience/Library/sensory%20evaluation.htm> – some information on a variety of sensory tests

<http://members.ift.org/IFT/Education/EduResources/>

<http://members.ift.org/IFT/Education/EduResources/mediaresource.htm> - actually a set of lesson plans and video on development of a food product.

# 2009 4-H State Days – Food, Nutrition and Food Science Contest

11/26/08

**Food Safety/Good Manufacturing Practices (GMPs) Violation Identification** – Participants will view (10) photos of food processing/handling scenarios. Participants will review the photo for food process violations (if any) and identify the violation from a list of Good Manufacturing Practices (GMPs) provided to the participants.

**Sensory Evaluation** – Two triangle tests will be conducted. Participants will be asked to identify the different sample through aroma, visual cues and/or textural differences.

**Nutrition Labels-** Using labels and packaging materials, participants will complete a quiz on nutrition facts labels, recommended allowances, and application of labeling information.

**Key Nutrients Knowledge** – Basic nutrition knowledge will be assessed through hands on scenarios and/or quiz formats focusing on the key nutrients, vitamins and minerals.

**Product Development** - Each team will receive a marketing scenario describing a need for a new or redesigned food product. The team will design a new food product or reformulate an existing product. Teams will be provided with a variety of packaging materials, resources, nutritional information, and ingredients to develop the product. Teams will have 45 minutes to develop their product and package. The product development process will be followed with a 5 minute formal presentation of the product to a judging panel. The presentation will be followed with a 5 minute question/answer session with the judges.

Teams will need to meet the following product development criteria:

- Formulate a product to meet the marketing scenario
- Develop a package design to reflect the developed product and include appropriate graphics and front panel.
- Include handling, shelf life and nutritional information. Nutritional information on the food label should include a Nutrition Facts panel (with serving size and energy intake information), an ingredients statement, and an allergen statement (when applicable).
- Provide information on appropriate Quality Control and Safety programs, i.e., GMPs and Hazard Analysis Critical Control Points (HACCP) program, product shelf life rationales, and choice of ingredient rationales.

## **SCORING – team and individual scores will be calculated**

Nutrition Quiz	45
Nutrition Labels	45
Food Safety/Sanitation Violation Photos	45
Triangle Test (2)	<u>15</u>
<b>Total Individual Points</b>	<b>150</b>

## **Team Product Development Project (55 minutes)**

Product name	10
Product Picture	10
Target market	20
Product description	20
Ingredients	20
Shelf-Life	10
Response to Judges' Questions	<u>10</u>
<b>Total Product Development Points</b>	<b>100</b>

**TOTAL TEAM POINTS (based on 4 person team\*) 700**

\*Each team member can earn 150 points (600) plus 100 for product development.

## 2009 4-H Food, Nutrition and Food Science Contest

<b>Team Name:</b>			
<b>Judging Criteria</b>	<b>Points Possible</b>	<b>Points Earned</b>	<b>Comments</b>
<b>Product Name:</b> Is it descriptive? Is it new?	<b>10</b>		
<b>Product Picture:</b> Is it descriptive? Is it new?	<b>10</b>		
<b>Target Market:</b> Is the target market well defined? e.g. Did the team give an age range? Gender?	<b>20</b>		
<b>Product Description:</b> Is it appealing? Is it new? Does it include the package type and serving size? Do the package type and serving size match the target group?	<b>20</b>		
<b>Ingredients:</b> Does the ingredient list match the product description?	<b>20</b>		
<b>Shelf-Life:</b> Is the shelf-life realistic?	<b>10</b>		
<b>Questions:</b> Did they answer the questions completely?	<b>10</b>		
<b>Total Score</b>	<b>100</b>		