



## ***FOOD FIGHT!*** **Competition Guidelines** ***(Teacher)***

### **Annotation:**

*FOOD FIGHT!* is a semester-long project that challenges students to become food scientists as they apply basic science concepts to the development of a new food product. Through a series of labs, classroom activities, and project assignments, students will learn the stages of product development and apply this knowledge to the development of an original food item.

The University of Georgia Food Science Club will sponsor a New Product Fair to be held at the Food Science and Technology Building on the University of Georgia campus each semester. The winning team from each class is invited to participate.

### **Primary Learning Outcomes:**

Students will develop an understanding of and appreciation for food science and the food industry.

Students will apply science concepts to the development of a new food product.

Students will acquire knowledge of food product development, food quality, food safety, food processing and preparation, packaging, product storage, and the marketing of new food products.

Students will develop and demonstrate leadership, communication, team working, and creative thinking skills.

Students will communicate clearly and effectively by oral and written means.

### **Duration:**

*Food Fight!* is a semester-long project that can be adapted to fit within the normal class schedule. In order to maximize the potential of the project, it is anticipated that one class period every one to two weeks be dedicated to *Food Fight!* activities.

### **Procedures:**

The *FOOD FIGHT!* lesson plans, included in this book, can be used to guide students through the product development process. Students will develop an original food item, complete a written product proposal, and orally present their product and proposal to the class. Students should work in groups of two to four members. A proposed sequence of project activities is laid out in the included *FOOD FIGHT!* schedule.

### ***Product Theme:***

A new product theme for competition in the UGA Food Science Club New Product Fair is selected each semester. For the current theme, please contact Amy Rowley ([arowley@uga.edu](mailto:arowley@uga.edu)) or Jeremy Peacock ([jpeacock@uga.edu](mailto:jpeacock@uga.edu)). If you do not plan to have students compete in the New

Product Fair, you and your students may select a product theme. Examples might include: a healthy snack item, a beverage, or a chocolate item.

*Product Proposal Requirements:*

1. Each team must prepare a product proposal that follows the outline below.
  - a. Name of New Food Product
  - b. Product Description – A brief description of the team’s original idea for a food product that fits within the assigned product theme. (1 paragraph)
  - c. Product Recipe – A basic recipe for the new food product listing the main ingredients. No abbreviations nor brand names should be used in the recipe.
    - i. *List of Ingredients* – Listed in the order they are used in the instructions for preparation. For each ingredient listed, provide a description of the ingredient’s function based on its physical, chemical, or biological properties (e.g. sugar used as a sweetener or flour used as thickener).
    - ii. *Instructions for Preparation* – Provide detailed procedures for preparing the new product.
  - d. Target Market – A description of the specific target audience for which the product is designed (e.g. young children, teenagers, college students, or young adults). (1 paragraph)
  - e. Package Design – A description of the package design for the product. Package examples include a box, can, bag, pouch, or carton. Original packaging ideas are encouraged. Provide an explanation of why the design is the best package for the new product. This explanation should be based on the physical and chemical properties of the product and package. Whenever possible, the package should be constructed. If the package cannot be constructed, a detailed drawing of the package must be provided. (2-3 paragraphs)
  - f. Storage and Display Plan – A plan for storing and displaying the product in the store, including an estimate of how long the product can be safely stored and displayed. (1-2 paragraphs)
  - g. Marketing Plan – A marketing plan to promote and advertise the new product. Examples of advertising methods that may be used are a television commercial video or skit, a magazine or newspaper ad, a billboard, or a radio ad or jingle.
2. Each team must give a five to ten minute presentation in class, including their marketing strategy, to introduce and briefly describe the new product to the class. Students must provide the product package (or a detailed drawing of the package design) and enough product sample for a class evaluation of product intent to purchase. *Note: Intent to purchase evaluation scorecards are provided.*

**Assessment:**

*Class Competition:*

Each participating class should hold a new product competition. Class competitions should be judged by the class teacher and students and should be scored based on the following rubric.

Written Presentation (150 points)

- Originality of Product Idea – 15 points



- Feasibility of Product Idea – 10 points
- Product Name – 5 points
- Product Description – 20 points
- Product Recipe – 25 points
- Target Market – 10 points
- Package Design – 25 points
- Storage and Display Plan – 20 points
- Marketing Plan – 20 points

*Note: Assessment of proposal will be based on completeness, clarity, grammar and spelling, and scientific thought.*

#### Product Presentation (50 points)

- Product – 10 points
- Package – 10 points
- Completeness – 8 points
- Clarity and Effectiveness of Oral Communication – 8 points
- Creativity – 4 points
- Peer Judging
  - Presentation – 5 points
  - Peer Intent to Purchase Evaluation – 5 points

#### **Food Science Club New Product Fair:**

The University of Georgia Food Science Club will sponsor a New Product Fair to be held at the Food Science and Technology Building on the University of Georgia campus each semester.

#### *Eligibility:*

Winning teams from any participating high school science class throughout Georgia are invited to compete. Project teams must consist of a minimum of 2 students and a maximum of 4 students. To compete, each participating teacher should notify Amy Rowley ([arowley@uga.edu](mailto:arowley@uga.edu)) or Jeremy Peacock ([jpeacock@uga.edu](mailto:jpeacock@uga.edu)) of their participation at the beginning of the semester.

#### *Awards:*

The New Product Fair will select one winning project. Each member of the winning team will be awarded a New Product Fair Certificate and a \$50 Savings Bond.

#### *Judging:*

Teams must give a 15 minute presentation. In addition to the product name, description, recipe, target market, storage and display plan, and marketing plan, the presentation must also include the actual product and product package (or a detailed drawing of the package design). Product proposals and presentations will be judged by graduate students and faculty of the University of Georgia Department of Food Science and Technology. Scoring of projects at the New Product Fair will be as follows.



#### Written Presentation (50 points)

- Originality of Product Idea – 5 points
- Feasibility of Product Idea – 5 points
- Scientific Basis – 10 points
- Completeness of Product Proposal – 15 points
- Quality of Written Communication – 15 points

#### Product Presentation (100 points)

- Student Appearance is Professional – 5 points
- Creativity – 5 points
- Visual Aids – 5 points
- Product – 15 points
- Package Design – 15 points
- Scientific Thought – 15 points
- Knowledge of Product and Proposal – 15 points
- Clarity and Effectiveness of Oral Communication – 25 points

#### Resources:

The following video provides an introduction to the product development process.

- From Concept to Consumer: Food Product Development, 21:40 min., Institute of Food Technologists (IFT)

The following websites may be useful during the product development process.

- IFT – <http://www.ift.org>
- Institute of Food Technologists Student Association (IFTSA) Product Development Competition – <http://www.ift.org/iftsa/competitions/pdc.html>
- <http://www.foodproductdesign.com/archive/editorial.html>
- The Department of Food Science and Technology - <http://www.uga.edu/fst/>
- The Extension Food Science and Food Safety – <http://fsext-outreach.ces.uga.edu/>



## ***FOOD FIGHT!*** **Suggested Schedule**

	In-Class Activity	Assignment		Teacher
		Assign	Collect	
Week 1	Introduce Product Development and <i>FOOD FIGHT!</i> Project, Announce Product Theme, Group Selection <b>Resources Needed:</b> <i>Welcome to FOOD FIGHT!, FOOD FIGHT! Competition Guidelines</i>	Individual Product Idea	NA	NA
Week 2	Team Meeting to Share & Rank Product Ideas	NA	Individual Product Ideas & Team Rankings	Feedback on Product Ideas & Rankings
Week 3	Team Meeting to Review Feedback & Select Final Product Idea	Product Name & Description	Final Product Idea	NA
Week 4	Ingredient Functionality: How Sweet It Is! <b>Resources Needed:</b> <i>How Sweet It Is! Lesson Plan &amp; Student Handouts</i>	List of Ingredients & Functions	Product Name & Description	Feedback on Product Name & Description
Week 5	Formulation: The Chemist's Cookbook <b>Resources Needed:</b> <i>The Chemist's Cookbook Lesson Plan &amp; Student Handouts</i>	Product Recipe	List of Ingredients & Functions	Feedback on List of Ingredients & Functions
Week 6	Marketing: Can You Believe Everything You See? <b>Resources Needed:</b> <i>Can You Believe Everything You See? Lesson Plan &amp; Student Handouts</i>	Target Market & Marketing Plan	Product Recipe	Feedback on Product Recipe

	In-Class Activity	Assignment		Teacher
		Assign	Collect	
Week 7	Sensory Evaluation: One of These Things Is Not Like The Other, The Tomato...Flavorful or Flavorless <b>Resources Needed:</b> <i>One of These Things Is Not Like The Other Lesson Plan &amp; Student Handout, The Tomato...Flavorful or Flavorless Lesson Plan &amp; Student Handouts</i>	Product Sample	Target Market & Marketing Plan	Feedback on Target Market & Marketing Plan
Week 8	Product Sampling & Intent to Purchase Evaluation <b>Resources Needed:</b> <i>Intent to Purchase Evaluation Scorecards</i>	Analyze Intent to Purchase Data, Calculate Score, & Review Product Suggestions	Product Sample	Feedback on Product Sample
Week 9	Packaging: The Perfect Package <b>Resources Needed:</b> <i>The Perfect Package Lesson Plan &amp; Student Handouts</i>	Package Design & Explanation; Storage & Display Plan	Intent to Purchase Score	NA
Week 10		Final Proposal, Presentation, Product Sample, & Package	Package Design & Explanation; Storage & Display Plan	Feedback on Package Design & Explanation; Storage & Display Plan
Week 11	<i>FOOD FIGHT!</i> Competition		Final Proposal, Presentation, Product Sample, & Package	Judge Projects, Compile Scores, & Select Winning Team
Week 12	Announce Winning Team			
TBA	UGA Food Science Club New Product Fair			