

Food Science and Technology

Curriculum Guide: *Food Science and Technology*

Unit: II. Food Processing

Unit Objective:

Students will demonstrate an understanding of the food processing industry by creating and describing a food product, in outline form, that will appeal to today's consumers and designing the packaging materials to effectively market the product.

Show-Me Standards: 2.1, FA1

References:

"Agricultural Sales." *National FFA Career Development Events Handbook*. Accessed April 13, 2004, from http://www.ffa.org/programs/cde/html/cde_events.htm#agsales.

Food for America. National FFA Organization. Accessed April 13, 2004, from http://www.ffa.org/ageducators/lps/documents/lps_foodforamerica.pdf.

"Food Science and Technology." *National FFA Career Development Events Handbook*. Accessed December 10, 2003, from http://www.ffa.org/programs/cde/html/cde_events.htm#food.

Food Science and Technology. University of Missouri-Columbia, Instructional Materials Laboratory, 1994.

Students may use additional outside sources to complete this activity.

Instructional Strategies/Activities:

- Students will engage in study questions in lessons 1 through 12.
- Students will complete AS 2.1, Soy Milk; AS 9.1, Soybean Processing; AS 9.2, Corn Sweeteners; AS 10.1, Processing Wheat; and AS 11.1, Making Nut Butter.
- Additional activities that relate to the unit objective can be found under the heading "Other Activities" in the following location: p. II-125.

Performance-Based Assessment:

Students will work in pairs or individually to develop a food product idea, create the product's packaging, and describe the product in outline form. Examples of products could include ready-to-eat cereal, breakfast bars, candy, beverages (soda, sports drinks, etc.), pizza, processed fruit snacks, stir-fried vegetables, or ready-to-eat sandwiches. Students will describe their product in an outline that should include the group of consumers that the product appeals to, how the product appeals to and meets the needs of the target group, why the packaging design was chosen, and reasons behind the various design elements of the packaging. Students also will create a full sketch of the product logo and a sketch of the packaging, which will show all sides of the packaging. The packaging sketch should include nutritional information, ingredients, product description, and any preparation instructions.

Assessment will be based on the overall quality of the content of the outline and the design and content of the logo and packaging sketches. Spelling, grammar, punctuation, and capitalization also will be assessed.

Unit II—Food Processing Instructor Guide

The instructor should assign the performance-based assessment activity at the beginning of the unit. Students will work toward completing the activity as they progress through the unit lessons. The assessment activity will be due at the completion of the unit.

1. Students will be working individually or in pairs to design a food product, draw a sketch of the product's packaging, and write a description of the product in outline form.
2. Have students think of a food product idea that will appeal to consumers and fulfill a need. Encourage students to be creative and innovative. Examples of products could include, but are not limited to, the following:
 - Ready-to-eat cereal
 - Breakfast bars
 - Candy
 - Beverages (soda, sports drinks, etc.)
 - Pizza
 - Processed fruit snacks
 - Stir-fried vegetables
 - Ready-to-eat sandwiches
3. Students will prepare sketches for their product that will include the following:
 - Full sketch of the product logo
 - Product packaging that shows all sides and includes the following elements:
 - Nutritional information
 - Ingredients
 - Product description
 - Any directions to prepare the product for consumption
4. Have students prepare an outline that answers the following questions about their product.
 - What is the product?
 - What group of consumers does the product appeal to?
 - How does the product appeal to and meet the needs of the target group?
 - Why was this packaging design chosen?
 - What are the reasons behind the various design elements used in the packaging?

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5. The final assessment score will be based on the overall quality of the content of the outline and the design and content of the logo and packaging sketches. Spelling, grammar, punctuation, and capitalization will also be factors in the assessment.

Unit II—Food Processing Student Handout

1. You will be working individually or with another student to design a food product, draw a sketch of the product's packaging, and write a description of the product in outline form.
2. Develop a creative and innovative food product idea that will be appealing to consumers and fulfill a need. Examples of products could include, but are not limited to, the following:
 - Ready-to-eat cereal
 - Breakfast bars
 - Candy
 - Beverages (soda, sports drinks, etc.)
 - Pizza
 - Processed fruit snacks
 - Stir-fried vegetables
 - Ready-to-eat sandwiches
3. Prepare sketches for your product that will include the following:
 - Full sketch of the product logo
 - Product packaging that shows all sides and includes the following elements:
 - Nutritional information
 - Ingredients
 - Product description
 - Any directions to prepare the product for consumption
4. In outline form, answer the following questions about your product.
 - What is the product?
 - What group of consumers does the product appeal to?
 - How does the product appeal to and meet the needs of the target group?
 - Why was this packaging design chosen?
 - What are the reasons behind the various design elements used in the packaging?
5. Your final assessment score will be based on the overall quality of the content of the outline and the design and content of the logo and packaging sketches. Spelling, grammar, punctuation, and capitalization will also be factors in the assessment.

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Unit II—Food Processing Scoring Guide

Name _____

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Assessment Area	Criteria	0 Points	1 Point	2 Points	3 Points	4 Points	Weight	Total
Content of Product Outline	<ul style="list-style-type: none"> <input type="checkbox"/> Product idea is creative and innovative <input type="checkbox"/> Establishes need for the product in a specific market <input type="checkbox"/> Includes all the required elements <input type="checkbox"/> Well organized 	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 12.5	
Design and Content of Product Sketches (Logo and Packaging)	<ul style="list-style-type: none"> <input type="checkbox"/> Well organized <input type="checkbox"/> Creative design <input type="checkbox"/> Includes all the required elements <input type="checkbox"/> Eye-catching and appealing to consumers 	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 10	
Technical Considerations (Written Aspects)	<ul style="list-style-type: none"> <input type="checkbox"/> Spelling <input type="checkbox"/> Grammar <input type="checkbox"/> Punctuation <input type="checkbox"/> Capitalization 	0 criteria met	1 criterion met	2 criteria met	3 criteria met	All 4 criteria met	X 2.5	
TOTAL								

Final Assessment Total _____/100 pts.

Comments:

