

Classroom Activity: Sensory and Flavor Theory of Peanut Products

Standard	<p>HUM-FS-3.2: Define sensory evaluation, identify the qualities that make-up the sensory characteristics of food, and explain how taste, aroma, and the mouth feel sensations combined to give food their flavor.</p> <p>HUM-FS-3.3: Explain what sensory evaluation panels do and conduct a sensory panel using appropriate controls and quantify and analyze the data.</p>
Set Induction	<p>YouTube Video: Snickers Peanut Butter Squared Commercial</p> <p><u>Questions to ask the class</u> What is a Sensory Panel? What was your favorite food or candy as a child? Did you ever dream about growing up and being the official taste tester of that food?</p>
Guided Instruction	<p>Sensory Evaluation PowerPoint and Student Notes</p> <p>The teacher will go over the presentation/lecture for the Sensory Evaluation while the students follow along with their Fill-In-The-Blank Notes.</p>
Independent Work	<p>Sensory Evaluation of Peanut Products:</p> <p>Have students individually taste test the following items:</p> <ul style="list-style-type: none"> • Creamy Peanut Butter • Crunchy Peanut Butter • Organic Peanut Butter • Dry Roasted Peanuts with No Salt • Dry Roasted Peanuts with Salt • Honey Roasted Peanuts <p>While they are taste testing, have the students fill out the Sensory Evaluation Form.</p>
Teamwork	<p>Student Groups-After tasting all peanut products students will brainstorm within their groups discussing results from the tasting and notes recorded on the Sensory Evaluation Form.</p> <p>Groups will compile data from taste test of all members, creating an overall team evaluation.</p>
Discussion	<p>As a class, discuss the findings of taste test research.</p> <p>Questions to ask the class at the end of sharing their answers:</p> <ul style="list-style-type: none"> • What characteristic(s) remained the same throughout all of the different products? • What characteristic(s) changed between most of the products? • What was your least favorite product and why?
Evaluation	<p>Student led presentations to the class based on their findings of the taste test. Groups will explain the various senses applied using descriptive.</p>

Sensory Evaluation Form

Use the following table to evaluate peanut products.

For each box, write at least three descriptive words or phrases for the following categories

- Appearance / Color
- Flavor / Taste
- Smell / Odor
- Texture/ Mouthfeel

Deductions will be taken for words like “Nasty”, “Gross”, “Okay”, “IDK”, etc.

If you need help with adjectives that describe these categories, check out this link: <https://bit.ly/sensorywords21> or use your Sensory Evaluation PowerPoint Student Notes.

We will share our findings after everyone has evaluated their foods.

	Appearance/ Color	Flavor/Taste	Smell/Odor	Texture	Overall Likeability (Scale 1-5, 5=Best)
Creamy Peanut Butter					
Crunchy Peanut Butter					
Organic Peanut Butter					
Dry Roasted Peanuts with No Salt					
Dry Roasted Peanuts with Salt					
Honey Roasted Peanuts					

Group Lab Activity: Preparing Peanut Butter

Standard	<p>HUM-FS-11.6: Conduct a sensory evaluation of foods with and without food additives/analogues and compile the data and examine the results.</p> <p>HOSP-ICA-13.1: Define sustainability, recyclable, energy efficient, food miles, carbon footprint, and biodegradable.</p> <p>HOSP-ICA-7.3: Demonstrate the concept of recipe “mise en place” by identifying and assembling ingredients and equipment for a specific recipe.</p> <p>HOSP-ICA-7.8: Follow the written directions to prepare recipe given.</p>
Set Induction	<p>YouTube Video: https://youtu.be/4iUduCtx7cA</p> <p><u>Questions to ask the class</u> What are the beneficial characteristics of the peanut plant? What are some of your favorite childhood recipes made with peanut butter? Does peanut butter not require refrigeration after it is opened? ?</p>
Guided Instruction	<p>Peanut Sustainability Power Point</p> <p>The teacher will go over the presentation/lecture for Peanut Sustainability while the students follow along by taking notes.</p>
Independent Work	<p>Preparing Peanut Butter:</p> <p>Have students individually review recipe, rubric, and lab expectations.</p>
Teamwork	<p>Students will be divided into groups of 3-4. Groups will collect mise en place for assigned recipe and prepare for lab production</p> <p>Each group will demonstrate knowledge and skills in preparing the assigned recipe.</p> <p>Groups will make various types of PB&J sandwiches with the finished product</p>
Discussion	<p>As a class, taste test the various groups prepared peanut butter.</p> <p>Provide Constructive Feedback based on the following questions:</p> <ul style="list-style-type: none"> • What characteristic(s) remained the same throughout all the different products? • What characteristic(s) changed between most of the products? • What was your least favorite product and why?
Evaluation	<p>Allow students to prepare various types of PB&J sandwiches to share amongst the class.</p> <p>Teacher will grade groups based on rubric provided.</p>

Peanut Butter Rubric

Group Members: _____

Class Period: _____

Criteria	Poor	Average	Excellent	Score
Sanitation	0 3 Presented product without using proper sanitation techniques	4 6 Somewhat acceptable sanitation presentation	7 10 Excellent sanitary presentation – product is covered and at proper temperature	
Presentation & Appearance	0 3 Appearance lacked color, texture, balance, and composition.	4 6 Appearance is acceptable but lacks qualities and presentation techniques	7 10 Appearance is appealing, appearance uses high quality presentation techniques.	
Recipe Use	0 3 Poor use of ingredients and technique of following recipe	4 6 Adequate overall use of ingredients for balance but not outstanding	7 10 Great use of ingredients, they complement each other in color, flavor, and texture.	
Flavor, Taste, Texture	0 3 Taste does not correspond to recipe and flavors of finished product. Poor texture. Flavor weak without body or presence.	4 6 Adequate, but not outstanding taste. Recipe could be refined slightly and may be slightly unbalanced. Texture might be A bit off Flavor may be lacking slightly or too powerful with one ingredient	7 10 The item carries dominant peanut flavors. The components fit together. The texture and flavor are pleasing to taste.	
Originality of PB&J	0 3 Sandwich lacks originality	4 6 Sandwich originality is acceptable.	7 10 Sandwich is highly original.	
Score				
Total Score (Out of 50 points)				

Teacher Notes:

Healthy Snack Recipe Rubric

(Made with peanuts or peanut butter)

Recipe Name: _____

Group Members: _____

Class Period: _____

Criteria	Poor	Average	Excellent	Score
Sanitation	0 3 Presented product without using proper sanitation techniques	4 6 Somewhat acceptable sanitation presentation	7 10 Excellent sanitary presentation – product is covered and at proper temperature	
Presentation & Appearance	0 3 Appearance lacked color, texture, balance, and composition.	4 6 Appearance is acceptable but lacks qualities and presentation techniques	7 10 Appearance is appealing, appearance uses high quality presentation techniques.	
Recipe & Ingredient Compatibility	0 3 Poor use of ingredients and technique of following recipes. Ingredients do not hold and complement each other with one excessively dominant.	4 6 Adequate overall use of ingredients for balance and compatibility okay but not outstanding	7 10 Recipe ingredients complement each other in color, flavor, and texture. Are the ingredients balanced in size and amounts appropriate	
Flavor, Taste, Texture & Doneness	0 3 Taste does not correspond to recipe and flavors of finished product. Poor texture. Flavor weak without body or presence.	4 6 Adequate, but not outstanding taste. Recipe could be refined slightly and may be slightly unbalanced. Texture might be undercooked or over cooked. Flavor may be lacking slightly or too powerful with one ingredient	7 10 The item carries dominant peanut flavors. The components fit together. The texture and flavor is pleasing to taste.	
Originality	0 3 Recipe lacks originality	4 6 Originality is acceptable.	7 10 Highly original.	
Score				
Point Deduction: Submitted item other than the typed recipe (Subtract 5 points)				
Point Deduction: Submitted less than 6 servings (Subtract 5 points)				
TOTAL DEDUCTIONS				
Total Score (Out of 50 points)				

Teacher Notes:

Classroom/ Lab Activity: Healthy Snacks made with Peanuts or Peanut Butter

Standard	<p>HUM-FS-9.2: Describe the functional role of protein in food products</p> <p>HOSP-ICA-9.7: Demonstrate healthy cooking techniques and recipes</p> <p>HOSP-ICA-10: Identify various food products used in a commercial foodservice operation and list the proper handling and storage procedures for each.</p>
Set Induction	<p>YouTube Video: https://youtu.be/8xQnZ3pTh8Y</p> <p><u>Questions to ask the class</u></p> <p>What are some of the main health benefits of peanuts?</p> <p>Peanuts are a part of which family of foods?</p> <p>What are some of your favorite snacks to make with peanuts or peanut butter?</p>
Guided Instruction	<p>Peanut Nutrition PowerPoint and Student Notes</p> <p>The teacher will go over the presentation/lecture for the Peanut Nutrition while the students follow along by taking notes.</p>
Independent Work	<p>Healthy Snacks made with Peanuts or Peanut Butter</p> <ul style="list-style-type: none"> • Think about your favorite childhood snack made with peanuts or peanut butter. • Research recipes for low calorie healthy snacks that include peanuts or peanut butter.
Teamwork	<p>Divide class into groups of 3-4 student.</p> <p>Prompt for students, “You have been tasked by the Institute of Food Technology to create an afternoon snack for children 6-10 years old that is full of protein by using peanuts and at least three of the provided ingredients. In groups, develop a recipe, sales pitch, and prepare recipe for evaluation.”</p> <p>(Obviously, you can change this to whatever age group you want)</p> <p>Allow students to work in pairs to brainstorm, develop, and refine their presentation, which will include the afternoon snack recipe, their short sales pitch of their product</p> <p>Type recipe and prepare recipe for tasting. Take a picture of the completed product.</p>
Discussion	<p>As a class, evaluate each recipe, taste product, review nutritional value</p> <p>Questions to ask the class at the end of preparing healthy snacks:</p> <ul style="list-style-type: none"> • What was the motivation behind your group’s choice of ingredients? (Think of your range of senses when eating food) • What was your least favorite healthy recipe and why?
Evaluation	<p>Allow student groups to prepare newly developed peanut afternoon snack for class to taste test and provide feedback.</p>