

# Activity 2:

## Food Selection

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### Objective

The students will determine the acceptability of food products for space flight by participating in a sensory taste panel.

### Science Standards

- **Science as Inquiry:** Abilities necessary to do scientific inquiry
- **Life Science:** Matter, energy, and organization in living systems
- **Science in Personal and Social Perspectives:** Personal health
- **Physical Science:** Properties of objects and materials

### Mathematics Standard

- **Computation**

### Helpful Hints

1. If a food is disliked, delete that item from the list.
2. Students should not discuss the foods with group members while tasting the foods. Students should do their own evaluations and then compare.
3. If necessary, use water and crackers between samples to remove prior tastes.
4. Many of these foods can be found at the local grocery store.

### Materials Needed

Tray  
Paper plates  
Food samples (from menu list in appendix)  
Drink samples (from menu list in appendix)  
Water  
Crackers  
Taste Panel Evaluation Form  
Taste Panel Procedure and Descriptive Comments Form

### Background

Astronauts select their menu for space about 5 months before they fly. For the Space Shuttle, they select a menu that will serve them through the duration of their flight. For the ISS, they will choose a 30-day flight menu. These foods will be stored in the galley. A special taste panel is set up for the astronauts to taste a variety of foods when

they are selecting their menus. This lets the astronauts know whether they like the food before going into space. Foods are tested for appearance, color, odor, flavor, and texture. It does not help astronauts to take foods into space if they will not eat them. This taste panel helps facilitate the selection of a desirable menu and reduces the amount of waste from unacceptable, uneaten, or partially eaten portions.

### Procedure

Place the students into groups. These groups will be known as the expert groups, and each group should be assigned a type of space food. Each group will be responsible for tasting a variety of foods from their particular group. They will fill out the Taste Panel Evaluation Form, rating the appearance, color, odor, flavor, and texture. The students will rate these items using the numerical scores listed on the bottom of the form.

Each group will total the scores given each food and list them on the form. If an item receives a score of 6 or less, comments should be listed to explain the low score. All other items should be described by their good qualities. Brainstorm a list of descriptive words that can be used.

### Discussion

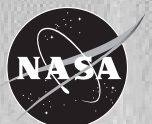
1. Which space food would you prefer to take with you into space?
2. In each food type, which item received the highest score? Why?
3. In each food type, which item received the lowest score? Why?
4. Why do you think it is important that you test the foods before you take them into space?

### Extensions

1. Have the students use the evaluation forms to choose a meal of their choice.
2. Use the descriptive words from the Taste Panel Evaluation Form to write a paragraph about the foods you have tested.

### Assessment

When all of the tasting, evaluating, and computing have been done, each group should prepare a short presentation to share with the class about their findings.



# Taste Panel Evaluation Form

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<b>ITEM</b>				
Appearance				
Color				
Odor				
Flavor				
Texture				
Overall				
Comments				

**High Scores:**

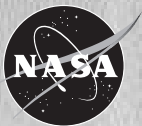
9-Like Extremely  
8-Like Very Much  
7-Like Moderately

**Mid Scores:**

6-Like Slightly  
5-Neither Like nor Dislike  
4-Dislike Slightly

**Low Scores:**

3-Dislike Moderately  
2-Dislike Very Much  
1-Dislike Extremely



# Taste Panel Procedure and Descriptive Comments Form

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The following guidelines should be followed when rating a food product on the Taste Panel:

1. Emphasis is on the quality of the food product rather than on personal preferences such as likes and dislikes.
2. If you absolutely dislike the food product because of personal preferences, do not rate it.
3. If a product is rated below a 6 for any category, then note the reason in the space provided.
4. The overall rating is your overall general impression of the product, which is not necessarily an average of the other categories, but should be consistent with them.
5. Do not talk with other panelists during evaluations.
6. Refrain from smoking, eating, or drinking for 60 minutes prior to panels.
7. If necessary, use water or crackers between samples to clear the palate.
8. If you have a question regarding the Taste Panel, ask the person conducting the panel.

## Descriptive Comments

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Here is a list of descriptive terms that can be used to describe an attribute of a food and be an aid for food development. You may use the list below to describe attributes of a food sample. A score of 6.0 or below should have some descriptive comment that will explain a low score.

<u>Taste/Order</u>	<u>Texture</u>	<u>Color/Appearance</u>
Bitter	Crisp	Dull
Sweet	Soft	Lustrous
Sour	Hard	Sparkling
Salty	Stringy	Bright
Oxidized	Tough	Light
Rancid	Chewy	Dark
Stale	Firm	Greasy
Tasteless	Fine	Glossy
Metallic	Grainy	Cloudy
Flat	Gummy	Old
Musty	Lumpy	Pale
Yeasty	Mushy	
Floral	Pasty	
	Rubbery	
	Sticky	
	Stiff	
	Tender	
	Greasy	
	Juicy	

