

# Processed or Unprocessed Food?

## Lesson Description

Students will learn the difference between processed and unprocessed foods. They will understand the importance of eating minimally processed foods and learn how to identify processed foods by looking at an ingredient list on a food label. Together as a class they will classify foods into unprocessed, minimally processed and highly processed food categories and watch how an orange gets processed into orange juice.

- Time required: 60 minutes
- Location of lesson: Classroom

## Learning Objectives

- Define the terms “unprocessed foods” and “processed food”.
- Understand that unprocessed or minimally processed foods are generally more healthy than highly processed foods.
- Identify unprocessed, minimally processed and highly processed foods by looking at an ingredient list on a food label.

## Materials and Preparation

- 1 large piece of poster paper OR space on a white board
- Tape and markers for poster paper OR dry-erase markers for white board
- 2-3 large Navel oranges
- Blender
- Kitchen strainer
- Clear glass
- Sugar- a few tablespoons
-  **Processed or Unprocessed Food?**
-  **Unprocessed and Processed Food Pictures** – print out 1 copy and cut out cards
- Prepared vegetable snack of the week – 1 for each student
- Water to drink during the Class Warm-up – water dispenser in the classroom and 1 cup or a water bottle for each student

## Class Warm-up: Champion Cheer and Veggie Taste Test (5-10 minutes)

- Give each student a cup of water or ensure that they have a filled water bottle in front of them.
- Give each student the prepared veggie snack of the day.
- Lead the students in enthusiastically reciting the  **Champion Cheer**.

- At the end of the cheer, drink water and eat the veggie snack together.
- Have students complete their  **Taste Test Observations** about the vegetable snack of the week.

### Review of Last Lesson (2-3 minutes)

- Review the evaluation questions from last week's lesson. Evaluation questions from all lessons are listed at the end of the workbook .

### Class Discussion (10 minutes)

*What do you think is healthier- an apple or a piece of apple pie? Why is an apple healthier than apple pie? An apple is an **unprocessed or a whole food**- it is as close to its naturally occurring state as possible. It hasn't been "messed with" or processed by adding fat and sugar and removing it's nutrients by taking off the peel and cooking it.*

*Processing food means doing something to that food to change it from its natural state. Some foods are **minimally processed**- they are cut, dried or cooked, but nothing much is added or removed from them. Some foods are **highly processed**- they have a bunch of other ingredients added to them like sugar or oil or artificial colors or preservatives. For example, an orange is an unprocessed food. When we peel it and blend it up in a blender, it is minimally processed. When we strain out the pulp and add sugar to make orange juice, it becomes very processed.*

*Why do we process foods? Sometimes processing a food is necessary, like when we cook meat. But too much processing takes nutrients away from the food and adds things that aren't as good for us like fat, sugar and unnatural preservatives.*

*The healthiest foods that we can eat are foods that are the least processed. How can you tell if a food is processed? Looking at the ingredient list on a food package gives us clues. If there are lots of ingredients and if there are ingredients that you don't recognize, that food is highly processed. We want to eat mostly foods that are unprocessed or minimally processed.*

*We are going to find out how much some foods are processed and we are going to make a processed food ourselves.*

### Activities (40 minutes)

- **"Orange Juice Demonstration" (10 minutes):** Students observe how an orange gets processed into orange juice. Note: Substitute another food to process if desired (corn or other Native foods) oranges were chosen for simplicity of demonstration.
  1. Place oranges, blender, strainer, clear glass and sugar on a table at the front of the room.

2. Hold up an orange. *Is this orange an unprocessed or a processed food?*  
(Answer: unprocessed food) *It occurs naturally in this form, so it is a whole, unprocessed food. We are going to process it into orange juice.*
3. Ask a student volunteer to come to the front of the room to help peel the oranges.
4. Place the peeled oranges into the blender and process for a few minutes. Pour the juice from the blender through the strainer into the glass. Add a few tablespoons of sugar to the juice in the glass and stir.
  - a. Discuss: *What have we done to the orange? What have we removed from the naturally occurring orange?* (Answer: the fiber) *What have we added to the orange that didn't occur naturally?* (Answer: sugar)
5. More discussion:
  - a. *Fiber is really good for us. Juice removes all or most of the fiber from fruit and often adds extra sugar, which is unhealthy for us. It is best to eat the fruit in its naturally occurring "whole" state rather than drink processed juice or fruit drinks.*

-  **“Processed or Unprocessed?” (15 minutes):** Students sort foods into three categories: unprocessed, minimally processed or highly processed by looking at ingredient lists.
  1. Place the poster paper on the wall with tape and draw a large chart with 3 columns labeled “Unprocessed”, “Minimally Processed” and “Highly Processed” (see example below). Alternatively, draw the chart directly on the white board. Leave space under each label for students to post the food pictures.
  2. Hold up each  **Processed or Unprocessed Food Card**, one by one, and ask the class which category it belongs in. Read the ingredient lists to students to help them decide. Unprocessed foods are in their naturally occurring state. Minimally processed foods have been cooked or cut or dried but have nothing much added to them. Highly processed foods have something added to them like sugar, oil, salt or other ingredients that preserve them.
    - a. Answers:
      - i. Unprocessed: Blueberries, Grapes, Corn
      - ii. Minimally processed: cooked chicken, Applesauce
      - iii. Highly processed: Chips, Juice Drink, Spam Meat

Unprocessed	Minimally Processed	Highly Processed
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- **Game Time (15 minutes):** Students play a gameshow like game to review the processed vs. unprocessed concept.
  1. Divide the class into two teams.

2. 2 students (1 team member from each team) will come to the front of the room to answer a question. The teacher will call out a food and the student will have to answer which category the food belongs in; Unprocessed, Minimally processed or Highly processed. See foods and answers in chart below.
  - a. If they know the answer, they will push the buzzer (Any object can act as a buzzer. If you have a plastic “fat” replica, use it!)
  - b. If the student gets the question right, the entire team gets a point. If they are wrong, the other team (not just the individual, but the entire team) gets a chance to answer.
  - c. After each question, a new student from each team will come to the front for a turn.
3. The team with the most points at the end wins the game.

Game Time Foods (Questions) and Answers

<b>Unprocessed</b>	<b>Minimally Processed</b>	<b>Highly Processed</b>
Corn	Corn mush	Fritos
Water	Fruit smoothie	Soda
Potato	Baked potato	French Fries
Carrots	Carrot juice	Carrot cake
Wheat	Flour	Cookie
Raw chicken	Barbeque chicken	Chicken nuggets
Squash	Roasted turkey	Spam

### Evaluation Questions (5 minutes)

1. *How can we define a whole or unprocessed food?* (Answer: a food in its naturally occurring state)
2. *What is removed from an orange to make orange juice? What is added?* (Answer: fiber is removed. Sugar is added.)
3. *What is healthiest for us to eat - processed or unprocessed foods? Why?* (Answer: unprocessed or whole foods are healthiest. They have all of their naturally occurring nutrients and no added sugars or fats.)
4. *How much water should you drink every day?* (Answer: at least 6 cups of water a day)
5. *How many fruits and vegetables should you eat every day?* (Answer: at least 5 fruits and vegetables a day)
6. *Does gardening connect you to your culture and help you learn new words in your language?* (Answer: yes)

### Preparation for Future Lessons – Reminder for the Instructor

- Review the materials and preparation needed for the next lesson.

- Remember that an Elder guest instructor is needed for these Spring lessons: lesson 1 (Eating A Rainbow), lesson 4 (The Water Cycle), and lesson 9 (Plant Parts: Pollination).

**Notes**

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