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Food for America - Demonstration Plan

Unit: Processing

Demonstration: Butter Making (20-30 minutes)

Objective(s):

1. Students will be able to make butter from cream.
2. Students will be able to verbalize that agriculture processing is taking one product and making it into different products.

Materials, Supplies, Equipment, References, and Other Resources:

- One small mason jar with lid for each student
- Heavy cream
- Crackers or bread for tasting

INSTRUCTIONS – for quick distribution of supplies, have cream already poured in each of the jars for the students.

Introduction:

Connection to students – Who has ever tasted butter? What do we use butter for? (toast, bread, baking) Where does butter come from? (If they don't know, "I'll give you a hint, you can drink it and it tastes great with cookies!") Milk! What else comes from milk? (ice cream) In agriculture, farmers often take one product, like milk, and make it into lots of different yummy things for you and me to eat. That is called processing! Processing is when we take something grown or raised and make it usable in different forms.

Motivation – Today you'll become an agriculture processor and get to eat some of what you make too!

Overview – We are going to take heavy cream that you can buy in the store and process it into two other products. We will make butter and buttermilk.

Steps and Procedures for Performing the Skill/Task:

STEPS (What to Do)	Procedures (How to Perform the Step)
Demonstrate Processing	Do this in front of the class before letting them work on theirs.
1. Pour cream in jar	Fill jar with cold cream so there is an inch or two in the jar.
2. Lid	Screw lid on very tightly!
3. Shake	Shake the jar with two hands. (The whole process will take about 10 minutes. Just shake for a minute or so as small pieces start to stick together when demonstrating.)



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Plans for Learners/Participants to Practice the Skill/Task:

- Demonstrate how to fill and shake the jar in front of students.
- Pass out jars and cream to students.
- Have students shake their jars (about 10 minutes). There is fat and protein in the cream. As you shake the jar, the fat and protein pieces start to stick together. What you are left with is butter (the hard ball) and buttermilk (the liquid).
- Pass out crackers or bread and have students taste the butter they made.

Adaptations for Upper Elementary

- Incorporate facts and statistics about the dairy industry and milk. Check the United States Department of Agriculture www.usda.gov and the American Farm Bureau www.fb.com for updated statistics.
- Use a variety of milks (whole milk, cream, buttermilk, 2 percent milk) and evaluate the difference in butter collected.
- Have students identify a variety of areas in agriculture where a raw product is processed to produce different products.

Summary of Key Points:

- Have students clean up area

Conclusion – What did we do today? (made butter, processed milk/cream) How did your butter taste? What did we make the butter from? What is that called in agriculture? (processing) So what is agricultural processing? taking one product and changing it, or making different products from it) Next time you go to the store with your mom or dad, take a look at the food and see if you can figure out how it was processed, or where it came from.