

Milk & Our Foods

Part II — Butter

by Kanza Easterly-Keill

Objective

This lesson follows Milk, Part 1, and will show students the relationship between butterfat and milk so students will understand why butter “happens” and how easily it is made.

Alaska Performance Standards for 7th and 8th Grade:

Science: SA1.1 and SE 3.1

Reading: R3.5.1

Materials

- Whipping cream, enough for each small group to have 2 T.
- Zipper-lock bags, one for each group
- Rubber scrapers, bowls
- Crackers or slices of bread, cut in quarters
- Cube of commercially made butter
- Butter package (for nutritional information and ingredients)
- Optional: Pictures of butter churns and butter presses

Handout

Butter Information Sheet (attached).

Background

This is a continuation of Milk Mini-Lesson, Part 1. Review background information from Part 1. Remind students that butter is result of the butterfat molecules “clumping” together after agitation. Butter is 100% fat. It is a dairy product but not in the Milk Group on the Food Pyramid.

Lesson Introduction

Discuss what butter is made of and its nutritional qualities. Use a butter label and go over it with the students so they can see its ingredients and the nutritional info. Tell students that natural butter may not have the color they are used to...it will be a light creamy yellow, not the brighter yellow they are used to seeing. Ask them why the commercially made butter and margarine is a brighter yellow (artificial coloring). Show students pictures of a butter churn and butter presses.



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Lesson Procedure

1. Divide the class in to small groups of 2-3 students.
2. Measure 2 T. whipping cream into zipper-lock bags for each small group.
3. The students then begin squeezing their bags taking turns...no more than 30 seconds each at a time because the butter happens fairly quickly.
4. When groups are finished, they will cut their bags open and scrape the butter into a “class bowl.” You will press the butter together.
5. This bowl will be covered, labeled, and refrigerated for the next class period or later in this class.
6. After butter has sat for a bit, show the students the liquid, non-fat milk (whey) that has seeped out. The butter is ready to serve.

Compare

1. Show students the cube of commercially made butter or margarine and have them write their observations on their worksheet. Ask them why they think manufacturers make their butter/margarine brighter yellow (looks better to consumers?).
2. Before serving, explain that most commercially made butter/margarine has salt added and our butter, of course, does not. You might provide some salt so they can sprinkle a few grains on their sample.
3. Butter the bread or crackers and let student try them. They will be quite hesitant at first, wondering how something they made could possibly be as good as what you buy.

For Resources, Vocabulary, etc., see Lesson 1



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Name: _____ Date: _____ Class: _____

Butter Information Sheet:

	Butter made in Class	Purchased Butter	Margarine
List Ingredients			
Your observations: Color Texture Taste			
Thoughts:			