

Making Butter

Grades: K-5

Time Allotment: 30 to 40 minutes

Common Core Standards

CCSS.ELA-Literacy.RI.1.2	Identify the main topic and retell key details of a text.
CCSS.ELA-Literacy.RI.1.5	Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.
CCSS.ELA-Literacy.RI.1.10	With prompting and support, read informational texts appropriately complex for grade 1.
CCSS.ELA-Literacy.W.1.8	With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
CCSS.ELA-Literacy.RI.2.10	Read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2-3 text complexity band proficiently, with scaffolding as needed at the high end of the range.
CCSS.ELA-Literacy.RI.2.3	Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
CCSS.ELA-Literacy.RI.5.3	Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Objectives

Students will:

- List in sequence the steps in the butter making process
- Explain the physical process of making butter
- Understand the history of butter making
- Predict and observe what will happen as they participate in the butter making process

Materials

- Colonial period butter churn (if available)
- ¼ yard of cheesecloth
- 1 quart of heavy cream (at room temperature)
- Recycled baby food jars with lids
- Sea salt
- Wooden spoons
- Strainer
- 1 pound of grocery store butter
- Bowls

Anticipatory Set

- The teacher will place the boxed pound of butter in a position where the children can see it. The teacher will state that she bought this butter at the grocery store.
- The teacher should ask:
 - What is in the box?
 - Where does butter come from?
 - Do you know the history of butter making?
 - How is butter made?
- The teacher will record answers to above questions on chart paper to use as an assessment of understanding at end of lesson.

Teacher Presentation and Modeling

- The teacher will give a brief history of butter which includes the following facts. The teacher will also demonstrate the butter making process if a period churn is available.
 - Butter is the fat of milk in its solid form which comes from cows.
 - Butter has been made for hundreds of years.
 - In the 18th century, it was common practice to make butter in the spring when cows produced the richest milk.
 - The first step in producing butter is to separate the cream from the milk. This was done by placing the milk in pans to let the cream rise to the top.
 - At this point, the cream that had been collected was allowed to sit overnight in a cool place, typically a dairy.
 - The cream is then put into the butter churn and mixed as fast as a person could pull and push on the handle.
 - The churning continues until the cream seizes into a solid (butter) and a thin liquid (buttermilk).
 - The butter is then pushed between two wooden spoons or wooden paddles over a bowl to remove any excess buttermilk.
 - The butter is rinsed in cool water until the water runs clear.
 - Butter can be preserved by adding salt. Butter can be preserved for about two years if kept in a cool place.
- The teacher will now show the students how to make their own butter using the cream and baby food jars.
 - You will now make your own butter.
 - You will need a baby food jar and cream.
 - Take the lid off your jar and pour in cream until the jar is half full.
 - Replace your lid.
 - Shake the jar until you see the solids seize and the clear liquid.
 - Once your butter is formed, pour off the buttermilk.
 - Pour cold water over the butter.
 - Push your butter against the side of the bowl until no more liquid is coming out of it.
 - Add a bit of salt for flavor.

Guided and Independent Practice

- Students will get the supplies needed and make butter.
- As the students are shaking the jars, the teacher will ask the following questions:
 - What do you notice about the cream in the jar when you first start shaking it?
 - What do you notice about the cream as you continue to shake the jar?

Closure

- After butter is made, the students can compare their product with other students'.
- The teacher will ask the students why they think butter has been a part of the human diet for centuries.
- The teacher will help the students conclude butter is storable and a high energy food that adds flavor to other foods in our diet.

Assessment

- The teacher will observe the students as they proceed through the butter making process to assess their ability to complete the task.
- The students will be given paper and pencil. The teacher will tell the students to either write or draw pictures to give as detailed as possible account of the butter making process.

Extension of Lesson

- The students can do internet research to learn about different types of butter churns used throughout history.
- The students can use butter molds to create interesting shapes with butter.
- The students can research how butter is made today and compare it to butter making in the 18th century.