

Lisa Bullard

ACTIVITY: BUTTER HEAD BEAUTIES

Learning/Standards Focus:	Interdisciplinary (Science, Art, Language Arts)
Time Needed:	1 class period
Grade levels:	4-8 (skip the highlighted portions for younger students; include them for older students)
Activity Overview:	Youth learn about butter and create a "Butter Head Beauty" sculpture



OBJECTIVES:

- Describe the characteristics of butter.
- Create a Butter Head Beauty.
- Share a story about your Butter Head Beauty.

MATERIALS NEEDED:

- Loaf of bread
- 1 pound of softened butter
- Napkins (1 per student) and paper towels
- 3 clear plates (1 stick of frozen butter, 1 stick of softened butter, and some melted butter)
- Access to a freezer with shelves at least 6 inches apart
- 1-9 oz. Clear Solo Cup per student
- Stick of butter per student (NOT margarine! It has a different density and consistency☺)
- Table cover
- Assorted plastic utensils to share
- Sharpies
- Sealable plastic baggies
- Plastic wrap
- Toothpicks, Popsicle sticks, and other approved sculpting tools
- A variety of art materials (think about bottle caps for crowns, food coloring, cake decorating gel)
- Disposable gloves (optional, but use if you want to collect butter for public consumption)
- Video projection equipment/ability to stream Internet on a screen
- Photo or projected image of a sculpture from your area or a famous sculpture such as Rodin's "The Thinker"
- Digital camera if you want to take photos of the Butter Head Beauties

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DO AHEAD:

At least a day before the activity:

- Fill each clear Solo Cup halfway with water.
- Unwrap a stick of butter and stand it up in the cup.
- Carefully insert into a freezer so that the butter stick remains upright.
- Keep in the freezer until right before class!
- Preview the time lapse video showing a butter head being carved at the Minnesota State Fair website [http://www.mnstatefair.org/entertainment/timelapse/butter_sculpture.html]

Day of the activity:

- Set up demonstration plates: one with a frozen stick of butter, one with a softened stick of butter at room temperature, and one with melted butter.
- Set up tables with table covering, disposable gloves, assorted tools, Sharpies, and art supplies.
- Retrieve frozen butter sticks in cups from the freezer right before the class period.
- Set out plastic bags and wraps.
- Butter bread slices, cut in half, and place on napkins and cover for easy distribution.
- Set up video projection equipment/Internet streaming.

WHAT TO DO:

Introduction to the activity (10 minutes)

“People have been creating sculptures for thousands of years. [Show photo of a sculpture from your region or a famous sculpture.] Each year at the Minnesota State Fair, an artist carves sculptures of the heads of the Dairy Princess finalists who competed that year to become the new Princess Kay of the Milky Way. The unusual thing about these sculptures is that they aren’t carved out of stone or marble; they are sculpted in butter. The butter heads are one of the most popular exhibits at the Minnesota State Fair.

“In the mystery novel *Turn Left at the Cow* by Lisa Bullard, the character Travis freaks out when he finds a butter head in his grandmother’s freezer chest. Travis didn’t grow up in Minnesota, and at first he thinks he’s found a real human head. Even after he knows what it is, he can’t figure out why anyone would make a head out of butter.

“But butter and other milk products play an important part in Minnesota’s history and economy. The butter head sculptures are a way of recognizing the importance of the dairy industry to the state.

“In the culinary arts, an emulsion is a mixture of two liquids that would ordinarily not mix together. Butter is a water-in-oil emulsion. The milk proteins are the emulsifiers.

“Let’s learn a little bit about butter. Butter is about 80% butterfat and 15% water.

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“Butter can change consistency, depending on the temperature. It remains a solid when it’s refrigerated, but softens to a spreadable consistency at room temperature and can melt when heated over 90 degrees. [Show the different stages of butter. Spread some on a piece of bread and send it around.] Butter is a good source of Vitamin A, and a small amount added to low-fat foods such as vegetables may ward off feelings of hunger and improve the taste of the food.”

“The density of butter is about the same as ice. Density is a measurement that compares the amount, ratio, of matter that an object has to its volume. An object with a lot of matter in a certain amount of volume has high density. An object with a little matter in the same amount of volume has a low density. Butter has a high density of fat, 80% butterfat, and a low density of water, 15%.

“Butter is a fat. Fat, but not too much of it, has an important part to play in our nutritional health and brain development. There are different types of fats in our diet. Each source of fat, whether it comes from an animal or a plant, is used for cooking or eating, depending on the situation. Butter is often used for its taste.

“How many of you use butter at home? [Write the totals on the board:] What are some of the other fats you use at your home? [You might have to prompt the class.] Oils? Margarine?

“Today, we are going to make our very own butter heads! Each of you will have a stick of butter set in some ice and it is up to you to carve a “Prince” or “Princess.” It’s a race against time! The ice will melt by the end of the class period. Before you begin, you’ll have to wash your hands and use the Sharpie to put your name on the cup. As you work, please keep your butter shavings in your cup and remember not to lick your fingers. At the end of the class period, you will have the opportunity to talk about your creation. After that, we’ll pack them up and you can choose to take them home to eat if you like.

“Before we start sculpting, let’s watch this very speeded-up time lapse video showing one of the Minnesota State Fair butter heads being sculpted.”

[http://www.mnstatefair.org/entertainment/timelapse/butter_sculpture.html]

BUTTER HEAD BEAUTIES ACTIVITY (30 MINUTES):

- Students sculpt their butter heads.

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DEBRIEF (10 MINUTES):

- What surprised you about your experience?
- What was the most challenging part about this activity?
- What did you learn from this activity that you didn't know before?
- What advice would you give others who would do this activity?
- Who has a story to share about their butter head?

EXTENSIONS:

- The great debate: butter vs. margarine
- Make your own butter: jar containing buttermilk; secure lid and shake.
- Nutrition and culture: calories, saturated and unsaturated fats, types of fats found throughout the world

VOCABULARY:

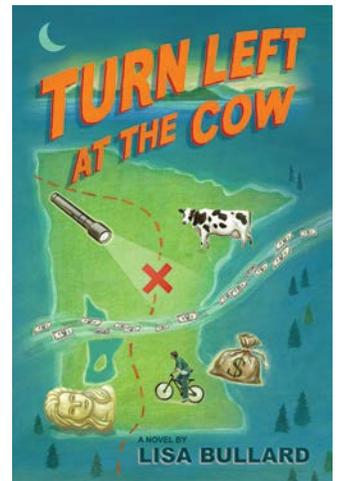
Emulsion: Emulsion is a mixture of two liquids that would ordinarily not mix together. Butter is a water-in-oil emulsion.

Density: A measurement that compares the amount, ratio, of matter an object has to its volume. An object with a lot of matter in a certain amount of volume has high density. An object with a little matter in the same amount of volume has a low density. Butter has a high density of fat.

TURN LEFT AT THE COW

Published by Harcourt Children's Books/Houghton Mifflin
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Thirteen-year-old Trav has always wondered about his dead-before-he-was-born dad. But when he heads from California to his grandmother's house in rural Minnesota, hoping to learn about his past, he gets more than he bargained for. It turns out his dad was involved in a bank robbery right before he mysteriously disappeared, and the loot from the take is still missing. Along with Kenny and Iz, the kids next door, Trav embarks on a search for the cash. But the trio's adventure quickly turns dangerous when it becomes clear that someone else is looking for the money – someone who won't give up without a fight!



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