

## **Teacher's Guide for Odyssey: "got milk?"**

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**An introductory activity:** Give students the following survey (before they have seen a copy of this issue) and encourage them to discuss their results in small groups.

1. I drink approximately \_\_\_\_\_glasses of milk a day.
2. I pretty much stopped drinking milk when I was younger  
\_\_\_yes \_\_\_no
3. I don't drink more milk for these reasons:  
(check all that apply)  
\_\_\_a.) I don't like the taste of milk.  
\_\_\_b.) I'm allergic (or sensitive) to dairy products.  
\_\_\_c.) I think it's too fattening.  
\_\_\_d.) I'd rather drink soda, juice, or water.  
\_\_\_e.) other: \_\_\_\_\_
4. I think I should drink more milk. \_\_\_yes \_\_\_no

### **For "The Almost Perfect Food" (pages 6-8)**

Ask students to come up with a short phrase describing the presence or absence of the following lettered nutritional elements in milk:

- a. Fiber
- Macronutrients:
- b. Carbohydrates
  - c. Fats
  - d. Protein
- Micronutrients
- Vitamins
- e. Vitamin A
  - f. Vitamin E
  - g. Vitamin D
  - h. Vitamin C
  - i. Vitamin
- Minerals
- j. Calcium
  - k. Phosphorus
  - l. Iron

### **For "Moo-ving Milk" (pages 6-9)**

Open a carton of milk, pour a glass, and ask students to write “My Autobiography”--but instead of writing about themselves they will be writing from the point of view of the milk in that glass.

Ask students to include the milk’s journey from the cow to the milking process, through the pasteurization process, the separation, and the packaging. (Offer choices for completing assignment: paragraph form, illustrations with commentary, etc.)

A sample beginning sentence: “It wasn’t easy getting here into this glass.” (Note: students might like to include information from the article “Robots at the Dairy” on pages 14-15.)

### **For “Your Skeleton Isn’t Dead Bones” (pages 17-19)**

Collect labels from various dairy products or print out a list of the calcium and fat content of a variety of foods; make available to students.

Ask students to scan the article to find the amount of calcium a teenager should have every day. (1200 milligrams) Then ask, “What would be the simplest—and healthiest way to make that kind of deposit in your bone bank each day, considering your individual tastes and needs?”

Ask for an individualized actual mathematic answer that lists foods, serving sizes, and amounts of fat and calcium.

### **For “The ‘Perfect’ Cow “ (pages 22-25)**

Begin by reading the final paragraph in the article; it states that cloning seems like a “no-brainer.” After a discussion focusing on the impracticality of cloning as a widespread solution, ask students to read the article and answer the following questions:

1. Who is Hanover Hill Starbuck?
2. Who raised him?
3. How many calves has he sired?
4. Find and copy the quote that gives the answer to the question, “What is the ‘perfect’ cow?”
5. About how much milk (in gallons) did a cow produce 100 years ago?
6. How much milk (in gallons) does a cow produce today?
7. Increased milk production can be attributed to what three factors?
8. Why would a dairy farmer have a different definition of a perfect milk cow than that of an ice cream company owner?
9. What kind of data does the DHI program collect? (Name three.)
10. What does DNA fingerprinting examine?
11. What kind of “living conditions” are best for cows?
12. Complete: “\_\_\_\_\_ cows do not produce as much milk.”

### **For “Poop Power” (pages 26-28)**

Directions to students: You have been selected to present an award to the Vermont Department of Agriculture. Write your speech, explaining what has happened in some places in Vermont, why they have set a good example, and what this research and practice can mean for all of us in the future.

### **For “And the Camel Jumped Over the Moon” (pages 29-32)**

In a classroom discussion, begin by asking students to estimate the number of species of mammals (approximately 4,550), and then brainstorm a quick list. Ask students which animals' milk they would be willing to drink.

After reading through the article, assign students to work in groups to create posters advertising camel's milk. Students should come up with brand names, some kind of graphic, and mention at least four of the benefits and facts about their product.