

Teaching Guide to *Shortcuts* by Jeff Harris

Introduction

Shortcuts by Jeff Harris is a beautifully illustrated, fact-packed page that makes learning fun. Each week, *Shortcuts'* multicultural cast (Juanita, K., Roland, Junior and James) offers facts, riddles, jokes and puzzles to help kids learn about science, geography, animals, food, history and holidays.

Each teaching guide provides ideas for expanding the lesson and creating discussion and learning activities for your students. The grade level for the guides is usually 3rd to 4th, but they can be adapted for use at other levels. The guides are broken down into four areas :

1. Questions for Discussion and Further Study

Designed to help students think and research, not just give one-word answers

2. Activity Ideas

Designed to allow students to be creative and teach themselves

3. Use the News

Designed to have students use the news in studying each topic

4. Quick Quiz

Designed to be adaptable to several grade levels, evaluate students' comprehension and build vocabulary and math skills

You might use the teaching guides in the following ways:

Questions for Discussion and Further Study: Engage the entire class by asking each question aloud and listing the students' answers on the board. Or have them use reference resources to give their own answers to the questions. Allow them to discuss other students' answers after they've researched the topics. Key words or phrases that can help students search for more information are italicized.

Activity Ideas: Give the students a time limit to research their projects, using library or study time. By having the students cite their resources you can check their work; or, alternatively, tell them which resource(s) you prefer them to use.

Use the News: These can be worked on individually but we suggest they work in groups to learn teamwork skills.

- **Quick Quiz:** We suggest you review the quizzes ahead of time and change the phrasing or difficulty level based on the students' abilities.

Shortcuts: A SERVING OF MILK

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Objective: After completing the exercises, students should have a better understanding of milk.

Subject Areas: The following information regarding milk will be discussed:

- What's so good about milk?
- How are milk products made?
- Making your own butter and yogurt

Evaluation: Students may be evaluated using the following point scale:

Four points: Information is accurate, organized, shows creative thought/use of materials

Three points: Information is accurate and organized

Two points: Information is mostly accurate; organization needs some work

One point: Significant inaccuracies; lacks organization

Topics for Discussion and Further Study

1. Milk has lots of vitamin D and calcium. What are they good for?
2. Try making your own butter or yogurt. It's easier than you might think. Search for the process on the Internet.

Activity Ideas

- There are many foods that are made with milk. Cheese, yogurt, and butter are a few. How are these tasty products made? Research and write a brief description of the process.
- Most nutritionists agree that milk can be good for most people to drink. However, there are some groups that disagree. Research and write a brief explanation of the pros and cons of eating and drinking milk products.

Use the News

Choose a milk product and create a newspaper advertisement for this item. Why should people buy it? What are its health benefits?

Answers to the Quiz

1.) a, 2.) d, 3.) b, 4.) a, 5.) a, 6.) c 7.) bacteria, 8.) sugar, 9.) 6 liters, 10.) 1½ liters

Quick Quiz – Milk

- Pasteurization was developed by Louis Pasteur.
a. True b. False
- Cow's milk is nearly _____ water.
a. 10% b. 30% c. 50% d. 90%
- Milk is the first food consumed by newborn reptiles.
a. True b. False
- All female _____ produce milk for their young.
a. mammals b. birds c. reptiles d. insects
- Chemicals a mother eats can be transferred to her milk.
a. True b. False
- Casein is a _____ that is found in milk.
a. mineral b. fat c. protein d. vitamin

Vocabulary Comprehension

- Pasteurized milk is heated to high temperatures in order to kill harmful _____.
- Lactose is a type of _____ that is found in nearly all mammals' milk.

Math Comprehension (subtraction, division, addition, fractions)

- If you had 10 liters of milk and poured 4 liters into another pail, how much would you have left?
- 9 liters of milk divided evenly between 6 pails would leave how much in each pail?