

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: SPINNING A TALE ABOUT SILK

For release the week of: June 17, 2013

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

Subject Areas: The following information about silk will be discussed:

- Silkworm life cycle
- Making silk thread
- Characteristics of silk cloth

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. How many cocoons are needed to produce one square meter/yard of silk?
2. What is the life cycle of a silkworm?

Activity Ideas

- How is silk thread made from cocoons? Discuss it as a group or class, and then watch this video to see the actual process. Were your ideas correct?
<http://www.youtube.com/watch?v=BibC0CqZhPI>
- What benefits or characteristics does silk have as a cloth? How is it different from cotton? Research and report on why silk is a useful material.

Use the News

- Silk is mostly produced in Asia. What news can you find that is from a country in Asia? Scan the paper and share what current events you find from the Far East.

Answers to the Quiz

1.) a, 2.) b, 3.) b, 4.) b, 5.) a, 6.) c, 7.) reeling, 8.) emperor, 9.) 12 cm, 10.) 1,100 ft.

Quick Quiz — Silk

1. Spiders produce silk.
a. True b. False

2. It takes about _____ days for a silkworm to completely spin its cocoon.
a. two b. three c. six d. ten
3. The cocoon is usually collected after the caterpillar emerges.
a. True b. False
4. A single cocoon may produce more than _____ meters of silk
a. 50 b. 1,000 c. 3,000 d. 9,000
5. Monks smuggled silkworm eggs out of China.
a. True b. False
6. Most high-quality silk is produced by _____ silkworms.
a. Hong Kong b. bamboo c. mulberry d. mayfly

Vocabulary Comprehension

7. The process of unwinding silk threads from a cocoon is called _____.
8. Huangdi was the _____ of China many years ago.

Math Comprehension (subtraction, division, addition, fractions)

9. If a worm was 2 millimeters long, and then increased its length by 60 times, how long would it be in centimeters?
10. What is $\frac{1}{3}$ of 3,300 ft. of silk?