

# 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 3<sup>rd</sup> to 4<sup>th</sup>, 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: GETTING TO KNOW KNOTS**

For release the week of: October 14, 2013

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

**Subject Areas:** The following information about knots will be discussed:

- Knots in medicine
- Speed tying and learning various knots
- Knots in art

**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 do you tie a “slip” knot? What would it be used for?
2. What kinds of knots do doctors use in surgery?

## **Activity Ideas**

- So many knots, so many uses ... How many do you know? Many of us are lazy and only use a square knot for everything. One activity to help you learn more knots might be to select a few as a class, learn them and then have speed-tying competitions. Groups could learn a specific knot and then teach it to the class so several different knots could be learned. There are diagrams and videos to help you learn knots. Then practice, practice, practice until you become proficient. Here's one video teaching eight different knots: <http://www.youtube.com/watch?v=PpHnwMaEX88>
- How are knots used in art? Are they different in various places in the world? Choose a type of knot art to research, and create a report or visual presentation to show the class how knots are used in artwork.

### **Use the News**

- Learning to tie knots can have practical uses in your life. Does the newspaper provide any practical knowledge you can use in your life? Read the news to find examples of articles that teach you something. Write down what you learn from reading a newspaper, or share your new knowledge with the class.

## **Answers to the Quiz**

1.) a, 2.) c, 3.) a, 4.) b, 5.) b, 6.) a , 7.) granny, 8.) bend, 9.) 2 inches, 10.) 5 inches

# Quick Quiz — Knots

1. Tying a knot in a rope causes it to become weaker.  
a. True b. False
2. A \_\_\_\_\_ knot is used to keep the end of a rope from slipping through a hole.  
a. hitch b. binding c. stopper d. bend
3. A hitch is a type of knot that is used to secure a rope to a post.  
a. True b. False
4. The \_\_\_\_\_ knot is the most popular type of knot.  
a. hitch b. square c. stopper d. figure 8
5. The “standing part” of a rope is the part you are tying into a knot.  
a. True b. False
6. The Inca Indians of \_\_\_\_\_ used knotted strings called quipus for record keeping.  
a. Peru b. Mexico c. China d. Arizona

## Vocabulary Comprehension

7. An improperly tied square knot becomes a “\_\_\_\_\_” knot, and doesn't hold well.
8. A \_\_\_\_\_ is a type of knot that is used to tie two pieces of rope together.

## Math Comprehension (subtraction, division, addition, fractions)

9. An 8-inch piece of rope cut in half, and then cut in half again, is how long?
10. If tying 3 knots in a 9-inch rope shortens it by 4 inches, how long is the shortened rope?