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: GETTING TO THE BOTTOM OF THE GRAND CANYON

For release the week of: March 5, 2012

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

Subject Areas: The following information regarding the Grand Canyon will be discussed:

- Why is there a difference in temperature at the bottom of the Grand Canyon?
- Images of the Grand Canyon
- The effect of dams on the Grand Canyon's environment

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. Did people ever live in the Grand Canyon?
2. What is it like to hike down to the bottom of the Grand Canyon? Can you drive there?

Activity Ideas

- No matter what season of the year it is, the Grand Canyon seems to be warmer at the bottom than it is at the top. Why is that? Have a class discussion about some possible reasons for this. Next, do some research to discover the facts that will explain this phenomenon. If you wish, here is a webpage with some useful information on the subject. http://answers.yahoo.com/question/index?qid=20080216081625AADIfiN
- Never been to the Grand Canyon? Here are some pictures and 360 degree panoramic images of the whole area. Just click on the dots on the map to see what it's like in that region. http://www.grandcanyon.org/fieldinstitute/virtualtour.asp

Use the News

- The Glen Canyon Dam is just one of the dams that affects the Colorado River and the Grand Canyon. Why are dams built? Do they create environmental problems? Research the benefits and problems with dams on rivers. Then write your own opinion about them, in general or just referring to the Grand Canyon.

Answers to the Quiz

1.) b, 2.) d, 3.) b, 4.) b, 5.) a, 6.) c , 7.) Park, 8.) geologists 9.) 1,500 meters , 10.) 24 degrees

Quick Quiz — The Grand Canyon

1. The temperature at the bottom of the Grand Canyon is much cooler than it is at the top.
a. True b. False

2. The _____ River carved the Grand Canyon about 6 million years ago.
a. Missouri b. Mississippi c. Amazon d. Colorado

3. The Grand Canyon is about 50,000 feet deep at its deepest point.
a. True b. False

4. The river in the Grand Canyon used to be colored _____ because of all the sediment it used to have in the water.
a. yellow b. red c. black d. green

5. The Grand Canyon was named by John Wesley Powell.
a. True b. False

6. The Grand Canyon is a maximum of _____ wide.
a. 2 km b. 9 mi c. 29 km d. 260 km

Vocabulary Comprehension

7. The Grand Canyon National _____ covers 4,931 square kilometers.

8. Scientists called _____ study the layers of rock in the Grand Canyon.

Math Comprehension (subtraction, division, addition, fractions)

9. If you descended 1,800 meters into the canyon, and then traveled 300 meters back up, how far from the top would you be?

10. If it is 76 degrees F at the top of the canyon, and 100 degrees F at the bottom, what is the difference in temperature?