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 REVEALING LOOK AT RATS

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

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

- Rat intelligence
- Rats and disease
- Rats in the movies

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. Do they use real rats in the movies when you see hundreds of them scurrying around scary places?
2. How big is the world's largest rat?

Activity Ideas

- How smart are rats? What kinds of intelligent behaviors do they show? Research and describe some examples showing how smart they really are.
- Do all rats transmit diseases? How are some diseases spread by rats? What diseases could be spread? What do these diseases do?

Use the News

- Take an existing comic strip and change one or more of the characters into rats. You'll have to redraw the comic characters, but keep the same text. How does it change the humor in the comic strip?

Answers to the Quiz

1.) a, 2.) d, 3.) a, 4.) b, 5.) b, 6.) a , 7.) rodents, 8.) teeth 9.) 50 , 10.) 9.6 cm

Quick Quiz — Rats

1. Rats breed very quickly.
a. True b. False

2. Their teeth may grow as much as 10 cm in a single _____.
a. day b. week c. month d. year

3. Most rats will live their entire lives in an area as small as a city block.
a. True b. False

4. In the wild, most rats live for _____.
a. a month b. a year c. 5 years d. 10 years

5. The two most common species of rats in the world are the brown rat and the white rat.
a. True b. False

6.   Scientists believe the brown rat and the black rat originated in _____.
a. Asia b. S. America c. Africa d. Australia

Vocabulary Comprehension

7. Rats, along with other animals such as beavers, squirrels and chipmunks are classified as _____.

8. A rat's _____ keep growing throughout its entire life.

Math Comprehension (subtraction, division, addition, fractions)

9. If 10 rats (5 pairs) produced 10 babies for each pair, how many babies would there be?

10. If a rat's teeth grew 8 mm per month, how many centimeters would that be in a year?