

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: TRAINING OUR SIGHTS ON RAILROADS

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

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

- Train trivia
- Railroad travel across America
- Railroad games

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. What was the longest train?
2. How fast do modern trains travel?

Activity Ideas

- How would you use the railroad, such as Amtrack, to travel across the country? Decide on a destination you could travel by train to from your area. Use the Internet to plan a rail trip and determine the cost.
- Think you'd be a good train engineer or railway controller? Try out a few of these online train games to test your metal. <http://railwayvalley.com/game/railway-valley-missions> or go back to the main page: <http://railwayvalley.com>

Use the News

- News reporters gather much of their information by interviewing people. Practice your interviewing skills by questioning someone you know (a parent, relative, or friend) about their experiences traveling by train. First, brainstorm a list of questions to ask them, but let them tell you anything they want about trains. Take notes as they speak. Keep your notes brief so you don't have to stop the conversation. Finally, write a description of what they tell you.

Answers to the Quiz

1.) b, 2.) b, 3.) b, 4.) b, 5.) a, 6.) d , 7.) crossties, 8.) distance, 9.) 600 miles, 10.) 60 mph

Quick Quiz — Railroads

1. There are many countries that don't even have one railroad.
a. True b. False
2. _____ are short sections of movable rails that are used to change trains from one track to another.
a. Sidings b. Switches c. Crossties d. Sleepers
3. Metal strips were added to the wooden rails in the mid-1700s.
a. True b. False
4. The first railroads were made of _____ rails.
a. wooden b. iron c. stone d. steel
5. Humans have constructed more than 1 million kilometers of railroads throughout the world.
a. True b. False
6. A _____ is a short section of track that runs parallel to the main track.
a. sleeper b. crosstie c. block d. siding

Vocabulary Comprehension

7. A railroad track consists of two steel rails connected by a series of wooden or concrete _____ or sleepers.
8. The _____ between rails is called the “gauge” of the railroad.

Math Comprehension (subtraction, division, addition, fractions)

9. If a train travels at 60 mph for 10 hrs, how far will it have traveled?
10. If a 480-mile trip took 8 hours, how fast was the train moving?