

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: KEEPING TRACK OF THE FOSSIL RECORD

For release the week of: November 21, 2011

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

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

- Types of fossils
- What are index fossils?
- Eras and eons

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. Besides real parts of ancient organism, what other types of fossils are there? How did they form?
2. Why might people have believed fossils were the work of the devil?

Activity Ideas

- Research how "index" fossils are used. What are some examples of index fossils? Use your own words to give an example of how one of these fossils is used by scientists.
- The fossil record helps us organize the history of life. Draw a time line of the eons and eras defined by scientists. Give an example of a specific fossil that can be found in each time period.

Use the News

- The newspaper reports on events that occur on various days and times of the day. Scan a newspaper and then make a simple timeline of several events that were reported. Events that will happen in the future can also be included in your timeline, such as a movie that starts next week.

Answers to the Quiz

1.) a, 2.) c, 3.) b, 4.) a, 5.) a, 6.) b, 7.) layers, 8.) eons, 9.) 20, 10.) 3,421,376

Quick Quiz — Fossils

1. The Precambrian Eon accounts for most of our planet's history.
a. True b. False
2. The three eras are the Paleozoic, Mesozoic, and _____.
a. Tenozoic b. Fenozoic c. Cenozoic d. Tertiary
3. Most of the plants and animals that have lived on our planet became preserved as fossils.
a. True b. False
4. Geologists often use index fossils as a quick way of estimating the relative ____ of rocks.
a. age b. composition c. hardness d. weight
5. Scientists use the fossil record to help locate oil.
a. True b. False
6. The combined data of all the fossils that have been found throughout the world and the strata in which they were found is known as the "fossil _____."
a. data b. record c. line d. book

Vocabulary Comprehension

7. Stratigraphy is the study of strata, or rock _____.
8. Geologists divide our planet's history into two _____, the Precambrian and the Phanerozoic.

Math Comprehension (subtraction, division, addition, fractions)

9. If a scientist looking for fossils divided an area into 5 sections across, by 4 sections down, how many sections would there be?
10. If one fossil was 10,422, 354 years old and another was 7,000,978 years old, what would be the difference in ages between the two fossils?