

# 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: SWIMMING WITH SEAHORSES**

For release the week of: May 13, 2013

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

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

- Capturing food
- Food chains
- Eye movement adaptations

**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. Why do scientists use Greek words for many of their discoveries?
2. Does a seahorse chase their food or just wait for it to float by?

## **Activity Ideas**

- Seahorses eat brine shrimp, but what do brine shrimp eat? And what preys on seahorses? Research this “food chain” and make a diagram of the chain. What other food chains can you find?
- Our eyes move together when we look at something. Why does this happen? What benefit does this give us? Why do a seahorse’s eyes move independently? What benefit does this adaptation give the seahorse? Research and report on the function of these different kinds of eye movement.

## **Use the News**

- What science articles can you find in the newspaper? What is the topic? Why was the article written? Read a science article and write a summary of the information you learn.

## **Answers to the Quiz**

1.) a, 2.) a, 3.) a, 4.) c, 5.) a, 6.) d , 7.) sea monster, 8.) pygmy, 9.) 6 cm, 10.) 10,500

## **Quick Quiz — Seahorses**

1. Seahorses do not have scales.  
a. True b. False
2. Seahorses feed mainly on brine \_\_\_\_\_.  
a. shrimp b. fish c. crabs d. hay
3. Seahorses have long, flexible tails.  
a. True b. False
4. A seahorse's pectoral fins are located on its \_\_\_\_\_.  
a. back b. belly c. head d. tail
5. Seahorses do not have a stomach.  
a. True b. False
6. A special \_\_\_\_\_ is located on the belly of a male seahorse.  
a. fin b. gill c. scale d. pouch

## **Vocabulary Comprehension**

7. The scientific name for seahorses, "hippocampus" comes from the Greek words for "horse" and "\_\_\_\_\_."
8. The \_\_\_\_\_ seahorse is the smallest species of seahorse.

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

9. If a very tiny seahorse were 1.5 cm in length, what would the total length be of 4 of them?
10. If a seahorse eats an average of 3,500 brine shrimp a day, how many would it eat in three days?