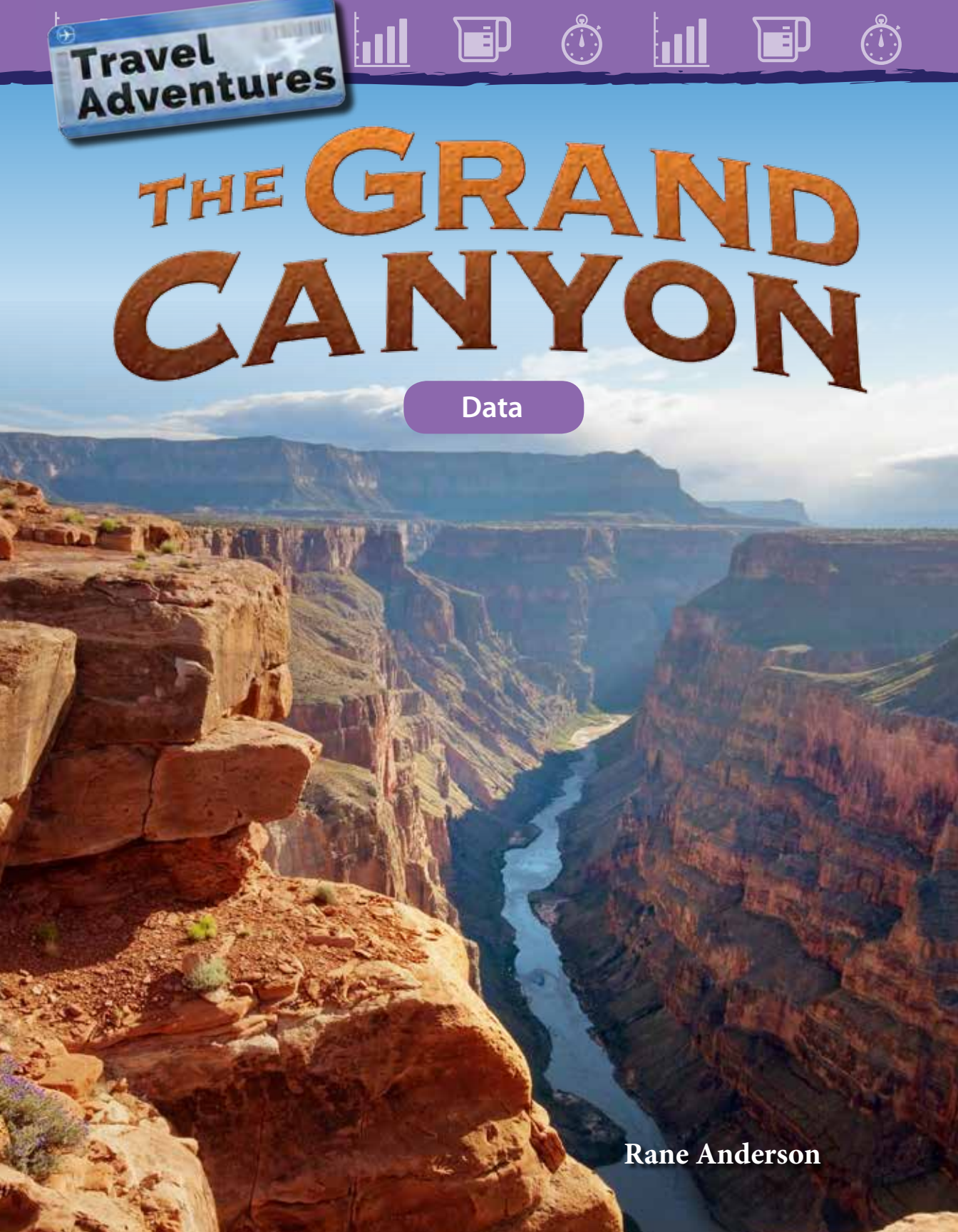
Travel Adventures

The Grand Canyon

Data



Rane Anderson

For teachers' inspection ONLY

Table of Contents

The Grand Canyon 4

The Journey Down 6

A Canyon Is Carved 10

Rock Stars, Rock Groups 14

Prehistoric Preserves 21

A Grand Trip 26

Problem Solving 28

Glossary 30

Index 31

Answer Key 32

For teachers' inspection ONLY

The Grand Canyon

Imagine staring into a 6,000-foot (1,800-meter) canyon. It is a long way to the bottom. Luckily, those who want to explore Grand Canyon National Park are not limited to staring. There are many trails that wind from the top to the bottom. Some people make the trek on foot. Others go by mule. Either way, the long trip to the bottom offers many chances to learn.

And many people want to make that trip! Millions of people visit the Grand Canyon each year. They travel from around the world to see the stunning views. The rocks of the canyon are a mosaic of colors. There are shades of red, orange, and brown. And with just one look, people wonder many things. How did this form? What is it made of? And, of course, how long does it take to get to the bottom and back to the top?



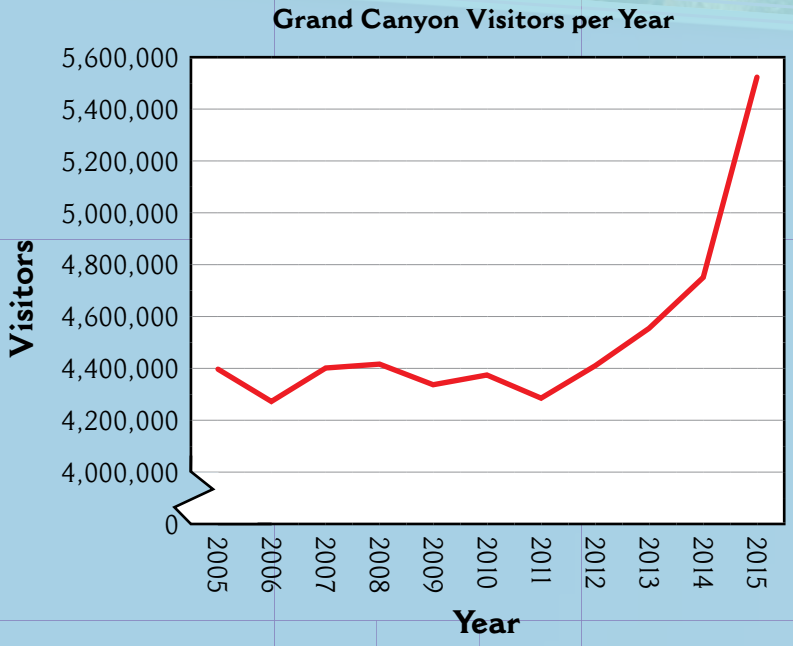
Toroweap Point offers a majestic view of the Grand Canyon and Colorado River.

For teachers' inspection ONLY

The sun rises on the colorful canyon.

LET'S EXPLORE MATH

This line graph represents the number of visitors that traveled to the Grand Canyon from 2005 to 2015.



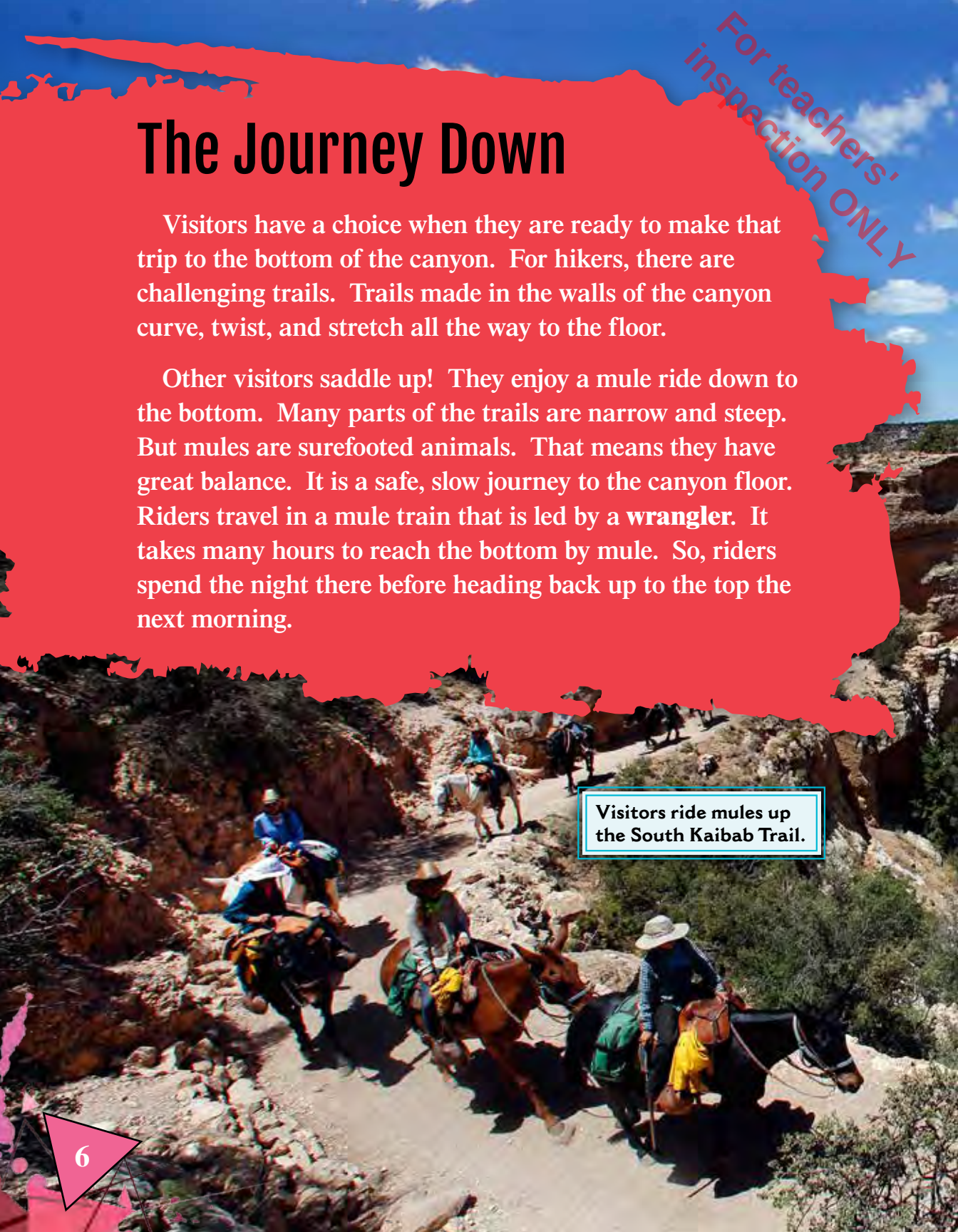
1. In which year did most people visit the Grand Canyon?
2. About how many more people traveled to the Grand Canyon in 2015 than in 2005?
3. About how many more visitors were there in 2014 than in 2006?
4. What is the scale used for the number of visitors?

For teachers' inspection ONLY

The Journey Down

Visitors have a choice when they are ready to make that trip to the bottom of the canyon. For hikers, there are challenging trails. Trails made in the walls of the canyon curve, twist, and stretch all the way to the floor.

Other visitors saddle up! They enjoy a mule ride down to the bottom. Many parts of the trails are narrow and steep. But mules are surefooted animals. That means they have great balance. It is a safe, slow journey to the canyon floor. Riders travel in a mule train that is led by a **wrangler**. It takes many hours to reach the bottom by mule. So, riders spend the night there before heading back up to the top the next morning.



Visitors ride mules up the South Kaibab Trail.

For teacher's inspection ONLY

Let's Explore Math

These young mules have already made many trips to the bottom of the canyon. First, they travel down the Bright Angel Trail. On the way back up, they climb the South Kaibab Trail. See how many round-trip adventures Arrow, Joo Joo, Lottie, Owl, and Pups have made.

Mule	Round-Trips
Arrow	𝍸 𝍸
Joo Joo	𝍸 ||||
Lottie	𝍸 |
Owl	𝍸 ||
Pups	𝍸

1. How many more round-trips has Arrow made than Pups?
2. How many fewer round-trips has Lottie made than Owl?
3. How many round-trips have the mules made altogether?

For teachers' inspection ONLY

A mule ride is a relaxing way to take in the Grand Canyon. But, there are also many trails for hiking. The Bright Angel Trail and the South Kaibab Trail are the two most common.

Hiking the trails on foot can be hard. But, it has its charm, too. Hikers can stop whenever they want. They can view the beauty of the canyon at their own pace. Or, visitors can join a guided hike. A ranger walks along with the hikers. The ranger can point out the natural features of the canyon.

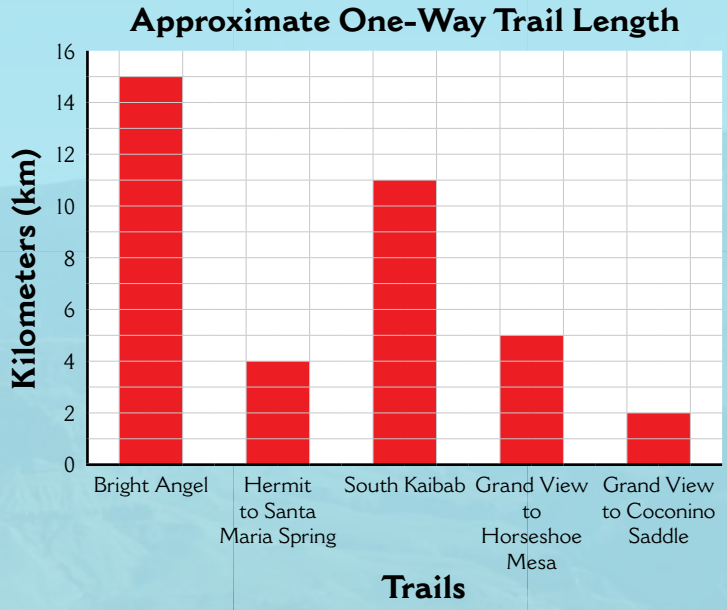
Once at the bottom of the canyon, a hiker can rest or keep exploring. After all, there are new things to see. Or rather, there are old things that hikers are seeing for the first time! The Elves Chasm Gneiss (ELVES KAH-zum NICE) is the oldest rock in the canyon. It is part of the "basement" rocks because it sits below all other rocks.



For teachers' inspection ONLY

LET'S EXPLORE MATH

This graph shows just a few of the many popular hiking trails at the Grand Canyon.



1. Which trail is the longest? About how many kilometers would the trail take round-trip? (Hint: The trail is the same length there and back.)

2. Which hike is longer, the hike to Coconino Saddle or to Horseshoe Mesa? How do you know?

3. Which two trails are shorter than the Grand View Trailhead to Horseshoe Mesa?

4. What is the scale used for the trail length?

