Tall Tales

LANGUAGE ARTS LEXILE 730L

Standard Supported

- Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text. (CCSS.RI.4.3)
- Write opinion pieces on topics or texts, supporting a point of view with reasons and information. (CCSS.W.4.1)

Resources

- Vocabulary Assessment Master (page 7)
- Language Arts Assessment Master (page 8)

Summary

- The article "Tall Tales" explores how new discoveries have changed people's ideas about giraffes and how this might impact conservation efforts in the future.

BUILD VOCABULARY AND CONCEPTS

- **conservationist**
- **habitat**
- **species**

Give each student a copy of the V**ocabulary Assessment Master**. Instruct students to write each word and its definition on their papers. Then have students draw a picture to remind themselves of what each word means.

When students are finished drawing their interpretations of individual words, encourage them to share their ideas about how the words could be related to giraffes in small groups. Then challenge each student to sketch a larger picture showing how the three words are related in that context. Instruct students to label their representations of each term in their drawings.

READ

Inform students that the purpose of this article is to tell them about something important that people recently learned about giraffes.

Display pages 2-3. Invite a volunteer to read aloud the headline and text. **Ask:** *What did scientists recently discover about giraffes?* (There is more than one species.) As a class, brainstorm ideas about how the species might be different.

Explain to students that learning that there is more than one species of giraffe is an important scientific discovery. To understand how and why, they must search for clues in the article. **Say:** S*cience is based on facts. And what people think about science changes if they learn new facts. In this case, the new facts have already changed the way people view giraffes. That could lead to even bigger changes down the road.*

Give each student a copy of the **Language Arts Assessment Master**. Have students read the article on their own. As they do, instruct them to record facts that explain what people learned about giraffes and how they uncovered this new information. Instruct students to record the facts they find on the top half of their worksheets.

LANGUAGE ARTS

TURN AND TALK

Have students turn and talk to discuss what they learned about giraffes. **Ask:** *What is a giraffe?* (Possible response: a very tall animal with long legs, a long neck, and brown spots) *Why did it take so long for people to learn there was more than one species of giraffe?* (People hadn't studied giraffes very much.) *Why are people worried about giraffes now?* (If all giraffes belonged to the same species, population numbers would not be a problem. But with four different species, giraffes could now be in danger of extinction.)

• **Explain Scientific Concepts** After reading the article remind students that science is based on facts. As the facts change, people's ideas about science evolve, too. Point out that the article contained all the facts they need to understand the new discovery about giraffes. Have students share their **Language Arts Assessment Masters** in small groups. Instruct them to compare the information they recorded. If group members overlooked any important facts, encourage them to add those details to their worksheets. Rejoin as a class. Invite groups to explain what they learned

• **Writing Opinions** Explain to students that learning about science is more than just collecting facts. Scientists must also interpret the facts to understand what they mean. Once they do that, they can form an opinion to help others understand why what they learned is important. In small groups, have students discuss reasons why this discovery about giraffes is important. Encourage them to use information on their **Language Arts Assessment Masters** or review the article for new facts that bolster their ideas. Then instruct students write a brief essay expressing how they think this new discovery will affect giraffes in the future on the lower portion of their **Language Arts Assessment Masters**. Encourage students to include facts and details from the article.

WRITE AND ASSESS

You may want students to write about what they learned to assess understanding. Encourage students to reflect upon what they read and how it affected their ideas about the topic.

- *What is a conservationist?*
- *How does the subhead "Small Science, Big Difference"relate to giraffes?*
- *What surprised you about what you read?*

Tall Tales

SCIENCE

Standard Supported

- Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (NGSS.4-LS1-1)

Resources

- Content Assessment Master (page 9)
- Comprehension Check (page 10)

Science Background

Giraffes are giant animals. As newborns, they are about 1.9 meters (6 feet) tall and weigh around 68 kilograms (150 pounds). By the time they become adults, they can reach up to 5.8 meters (19 feet) tall and weigh up to 1,270 kilograms (2,800 pounds). They are the tallest land animals on Earth.

Other than humans, the giraffe's only predators are lions and crocodiles. Although giraffes can deliver deadly blows with their long, strong legs, they gain additional protection by living together in groups called towers. One giraffe can stand guard while others catch the five to 30 minutes of sleep they need each day.

Until recently, it was believed that all giraffes belonged to the same species. However, a study of giraffe DNA released in 2016 revealed that there are actually four different species of giraffe—the Masai giraffe, reticulated giraffe, southern giraffe, and northern giraffe. The different varieties can be distinguished by examining the animals' spots.

While interesting, these findings are also cause for alarm. Fewer than 100,000 giraffes remain living in the wild. Now we know that number is actually divided into four distinct groups. It is more important than ever to protect giraffes, which are now one of the most endangered large mammals in the world.

ENGAGE

Tap Prior Knowledge

Draw a stick figure representing a giraffe on the board. Instruct students to write the name of the animal this drawing reminds them of on a piece of paper. Then ask students to raise their hands if they wrote the word "giraffe." Discuss reasons why. Invite students to share what they know about giraffes.

EXPLORE

Preview the Lesson

Display a photo of a giraffe from the article. Invite volunteers to describe the giraffes they see. Then have them describe the place where the giraffes live. **Ask:** *What is it like in this habitat?* (Possible response: There is brown grass on the ground and there are some tall trees in the background.) Point out the giraffes' long necks. **Ask:** *Looking at how long the giraffes' necks are, do you think they're more likely to eat grass or leaves?* (leaves) *Why?* (Their long necks allow them to reach the leaves.) Tell students that as they read the article they will learn how a giraffe's body parts help it survive. They will also learn about the differences between the four species of giraffes.

Set a Purpose and Read

Have students read the article in order to understand how a giraffe's body parts help it survive and to distinguish between the four species of giraffes.

NATIONAL GEOGRAPHIC Explorer

SCIENCE

EXPLAIN

Identify Body Parts that Help Giraffes Survive

Display pages 4-5. Read aloud the information in the brown blurb. Point out that each caption in the diagram tells how a particular body part helps a giraffe survive. Have students review the diagram in small groups. Rejoin as a class. Invite students to share what they learned. Then challenge them to explain
why a giraffe's body parts are well-suited for the environment where it lives. (Possible responses: Brown spots help a giraffe blend in with a brown landscape. Long legs and a long neck allow it to reach food other animals can't eat. Long legs also help it move easily over flat, bare land.)

Compare and Contrast Giraffe Species

Display pages 6-7. As a class, review the sections "Branching Out" and "Spot the Difference." Encourage students to identify similarities between the four species of giraffes.
(Possible responses; All have long legs, long necks, small heads, horns, and brown spots. All live in Africa.) Remind the class that for a long time, people thought all giraffes were the same. Now, they know that there are four different species. Give each student a copy of the **Content Assessment Master**. Then divide the class into small groups. Instruct groups to review the article. Challenge them to compare and contrast the four species of giraffes.

ELABORATE

Find Out More

Point out to students that the article describes the physical traits of giraffes in detail. But it doesn't tell much about their behaviors. Divide the class into small groups. Have groups conduct research to learn about the habits and behaviors of giraffes. Invite groups to present their findings to the class.

Extend Your Thinking About Giraffes

Remind students that until recently, scientists had not studied giraffes in detail. Scientifically, the article states, giraffes didn't seem that interesting. As a class, discuss reasons why scientists might not have wanted to study giraffes. Challenge students to identify reasons why giraffes are interesting and should be the subject of further research.

EVALUATE

Have students record their answers to the assessment questions in their science notebooks or on a separate sheet of paper.

- *What are the four species of giraffes?* (Masai giraffe, reticulated giraffe, northern giraffe, and southern giraffe)

- *How do a giraffe's eyes help it survive?* (A giraffe's long eyelashes and thick eyelids protect it from sharp thorns in the trees. This makes it possible for them to eat the leaves.)

- *How do a giraffe's spots help it survive?* (The spots are camouflage. They help a giraffe blend in with dappled sunlight and shadows of trees and plants.)

If you wish, have students complete the **Comprehension Check** to assess their knowledge of concepts mentioned in the article.

Name _____ Date _____

VOCABULARY ASSESSMENT: Tall Tales

Record each vocabulary word and its definition. Draw a small picture to show what each word means.

Word	Definition	Picture

Draw a larger picture to show how the words are related to giraffes. Add labels to show how you included each word in your sketch.

Name _____ Date _____

LANGUAGE ARTS ASSESSMENT: Tall Tales

Record facts from the article that tell what people learned about giraffes.
Tell how they found this new information.

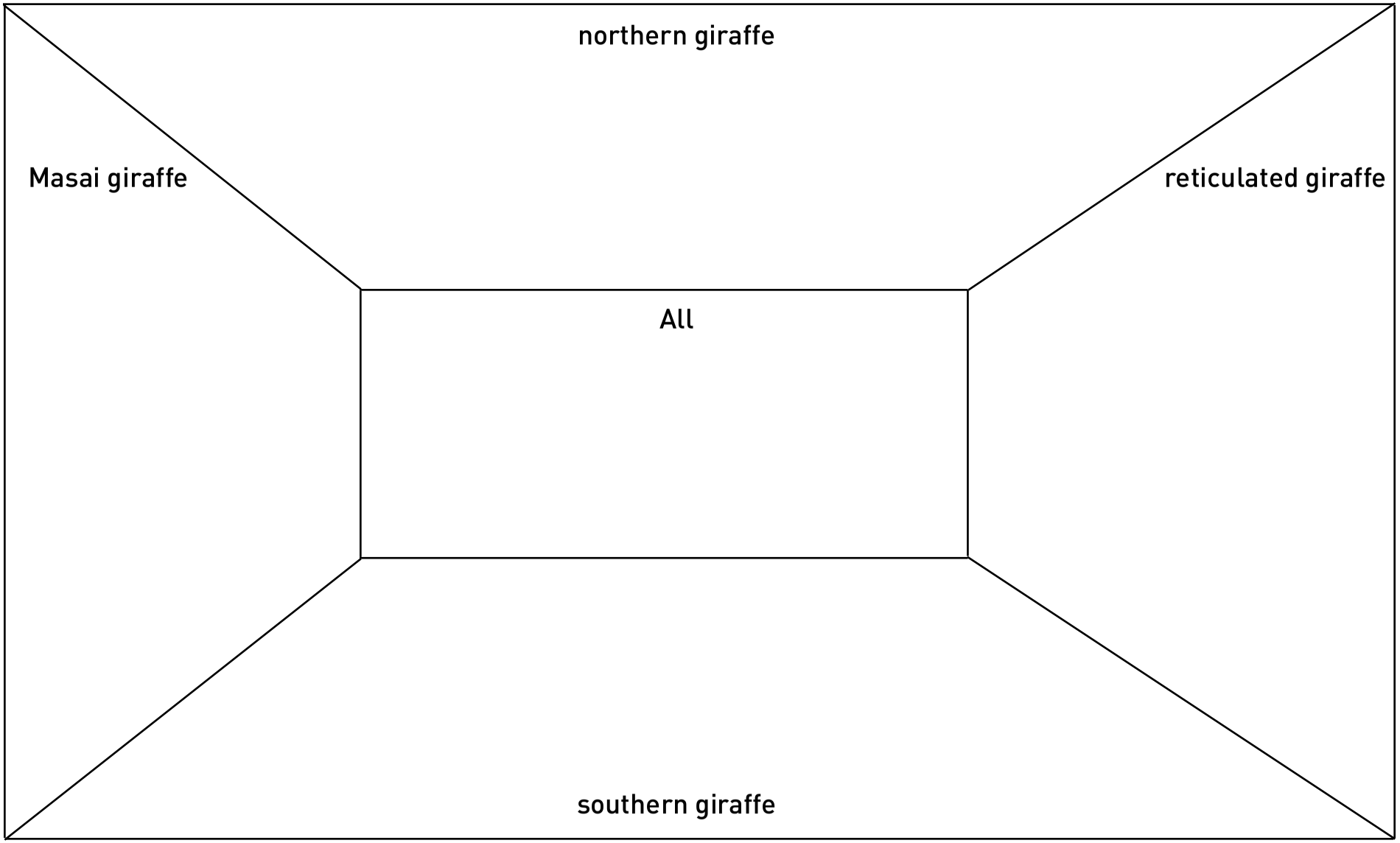
What They Found	How They Found It

Why do you think this new discovery will affect giraffes in the future?
Write about it. Use facts from the article to support your opinion.

Name _____ Date _____

CONTENT ASSESSMENT: Tall Tales

Compare and contrast the four species of giraffes.



Name _____ Date _____

COMPREHENSION CHECK: Tall Tales

Read each question. Fill in the circle next to the correct answer or write your response on the lines.

1. What proved to scientists that there were different species of giraffes?
   - Ⓐ bone samples
   - Ⓑ tissue samples
   - Ⓒ muscle samples

2. What can you observe to see the difference between giraffe species?
   - Ⓐ their height
   - Ⓑ their horns
   - Ⓒ their spots

3. Where do giraffes live?
   - Ⓐ grasslands and woodlands of Africa
   - Ⓑ deserts and plains of Australia
   - Ⓒ forests and mountains of Europe

4. Which body part closes to protect a giraffe from sharp thorns?
   - Ⓐ eyelashes
   - Ⓑ ears
   - Ⓒ nostrils

5. Why are conservationists concerned that there are four species of giraffes?

_____

_____

_____

_____

ANSWER KEY

Tall Tales

Assess Vocabulary, page 7
Students should record the words and definitions from the Wordwise feature on page 9.

conservationist: a person who works to protect animals and plants and promotes the careful use of natural resources
habitat: the place where a plant or animal lives
species: a group of animals or plants that are similar and can produce young animals or plants

Sketches should accurately reflect the meaning of each word. The larger picture should show how the words are connected. Students should label their representation of each word in the larger picture.

Assess Language Arts, page 8
Possible responses:
What: Different groups of giraffes live in different parts of Africa; Groups of giraffes lost contact with each other long ago and evolved; There are now four species of giraffes.
How: Scientists took tissue samples from each major group and compared them under a microscope. The samples were different, meaning the giraffes were from different species.

Students should write a short essay that includes facts from the article that support their opinions.

Assess Content, page 9
Masai giraffe: dark brown, jagged, leaf-shaped spots surrounded by creamy color; no spots on legs; live in southern Kenya, Tanzania, and Zambia
northern giraffe: chestnut brown spots surrounded by paler tan; no spots on legs; live in East and central Africa
reticulated giraffe: large orangey-brown spots surrounded by thin streaks of creamy white; pattern goes all the way down the legs; live in East Africa
southern giraffe: chestnut brown spots with jagged edges surrounded by paler tan; pattern goes down the legs; live in southern Africa
All: Answers may vary. Students will likely note a giraffe's size, its spots, any of the body parts mentioned in the diagram on pages 4-5, or that all giraffe species live in Africa

Comprehension Check, page 10
1. B; 2. C; 3. A; 4: C; 5: Possible response: There are fewer than 100,000 giraffes in Africa. That's not a lot for four species and makes them more likely to become extinct.