

Read the next two selections. Then choose the best answer to each question.



Wildlife Wonders

In this issue: Find out why koalas hug trees!

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Keeping Cool

- 1 There's something about the sight of furry koala bears—they look so cuddly, you just want to give them a hug. Of course, koalas don't hug . . . or do they? Recently, during an extreme heat wave in Australia, scientists noticed something unusual. As the temperatures rose, koalas high in the eucalyptus trees climbed down from the treetops. Then they spread out on lower tree limbs. It looked as if they were embracing the trunks. But why would koalas hug trees?



A Koala Hugging a Tree

- 2 Scientists have studied koalas for years. They know that koalas cannot sweat. The tree-dwelling mammals have few ways to stay cool during the hottest days. They can lick themselves or pant. However, both methods cause them to dehydrate. They could leave the safety of their trees to search for water, but water is difficult to locate. Besides, the koalas might run into a predator.
- 3 The scientists decided to do some detective work. They tracked 37 koalas that had been radio tagged. The tags helped the scientists locate the koalas so they could observe the koalas more closely. First they noted the animals' posture and location in the trees. When the weather was mild, the koalas sat high up in the treetops. They ate eucalyptus leaves or curled up in balls. However, as the weather turned steamy, the koalas climbed farther down. They pressed their bodies close to tree trunks.

- 4 Next, scientists used technology to find out why the koalas behaved differently depending on the weather. They placed a special infrared camera on a long pole. The camera measured the air temperatures surrounding the animals wherever they chose to sit. Then scientists took photos. The camera made thermal images that showed heat. In thermal images, darker colors show cooler temperatures. Lighter colors represent hotter temperatures.



A thermal image shows that this koala's body temperature is higher than the temperature of the tree trunk.

Used with permission.

- 5 These images verified that koalas hug trees to keep cool. They showed that the tree trunks and lower limbs were up to nine degrees cooler than the surrounding air. The trees kept cool by drawing up water through their roots from deep below ground.
- 6 Koalas were using the trees to absorb their body heat. By completely spreading out against the cooler trees, the animals could lower their temperatures as much as 68 percent. This allowed the koalas to conserve the water in their bodies. No wonder these cuddly creatures wanted to wrap their bodies around a tree trunk. Clearly, hugging trees offers relief to koalas when temperatures rise.

Use “Keeping Cool” (pp. 9–10) to answer questions 7–10. Then fill in the answers on your answer document.

- 7** Read this information about the origin of the word verify.

from Latin *verus*, meaning “true”

This information helps the reader know that verified in paragraph 5 means —

- A** proved
- B** compared
- C** observed
- D** suspected

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- 8** What is the best summary of the article?

- F** Koalas are furry mammals that can be found in Australia. Over the years scientists have learned a great deal about these tree-dwelling animals. For example, scientists know that koalas eat eucalyptus leaves and hug trees.
- G** Scientists wondered why koalas grasp the lower trunks of eucalyptus trees when the temperature rises. By using technology to study koalas, scientists discovered that doing so allowed the koalas to conserve the water in their bodies.
- H** Scientists used technology to observe koalas that hug trees. The scientists located the animals with radio tags, took photographs of them, and measured their temperatures.
- J** It is difficult for koalas to live in hot environments because they cannot sweat. They can lick themselves or pant, but these methods can cause them to become dehydrated.

9 Which idea is supported by information found throughout the article?

- A** Koalas can dehydrate while trying to stay cool.
 - B** Studying koalas requires special equipment.
 - C** Searching for water is a dangerous activity for koalas.
 - D** Changes in temperature affect the behavior of koalas.
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10 Based on information in paragraph 4, why does the tree trunk appear dark in the thermal image?

- F** To make the koala easier to see
- G** To show it absorbs heat from the koala
- H** To represent its cooler temperature
- J** To illustrate the water inside the tree trunk