

88 The Giant Saguaro

The giant saguaro may well symbolize the desert, but it is more than a symbol, even more than a plant. To a host of creatures—birds, mammals, and insects—the stately saguaro is home. It is an apartment house—and an air-conditioned one at that.

A pair of Gila woodpeckers once constructed an apartment atop a twenty-five-foot saguaro. These carvers cut a hole two inches in diameter into the cactus. They bored straight for about three inches, then turned sharply downward and dug a chamber about nine inches deep and four inches wide.

White pulp exuding sticky sap lined the hole. Over the next few months, the sap hardened to form a dry, tough callous all around the hole, making the hard walls and a floor for the apartment. In April, the birds came back to move into their apartment and get started on the important business of raising babies. On the hard, bare floor of the hole, the female laid four white eggs and sat on them in cool comfort.

Within the plant, behind the tough lining, the living sap of the cactus flowed. This liquid kept the temperature inside the hole well below the hot midday temperature outside. All day the cactus absorbed heat from the sun, but the interior of the hole remained cooler than the sweltering outdoors. At night, when the outside heat quickly escaped into the sky, the woodpeckers were snug in their house, heated now by the warmed cactus sap.

Main Idea

1

	Answer	Score
Mark the <i>main idea</i>	☐ M	15
Mark the statement that is <i>too broad</i>	☐ B	5
Mark the statement that is <i>too narrow</i>	☐ N	5
a. A small chamber inside a saguaro will remain cool even in the desert heat.	☐	_____
b. The saguaro is a very useful plant.	☐	_____
c. A saguaro can become an air-conditioned apartment for birds and other animals.	☐	_____

Score 15 points for each correct answer.

Score

Subject Matter 2 Another good title for this selection would be

- ☐ a. Woodpecker's Endurance.
- ☐ b. This Apartment Is for the Birds.
- ☐ c. Symbols of the Desert.
- ☐ d. Want to Buy a Cactus?

Supporting Details 3 The hardened sap becomes the

- ☐ a. food for the young.
- ☐ b. air conditioning for the apartment.
- ☐ c. door of the apartment.
- ☐ d. walls and floor of the apartment.

Conclusion 4 The author seems to admire the

- ☐ a. ideal suitability of the woodpecker's home.
- ☐ b. giant saguaro.
- ☐ c. desert's cruelty.
- ☐ d. intelligence of woodpeckers.

Justifying Details 5 The author develops this passage

- ☐ a. by showing contrasts.
- ☐ b. by using negative arguments.
- ☐ c. by describing an incident.
- ☐ d. by making a comparison.

Vocabulary Context 6 Sweltering means

- ☐ a. very dry.
- ☐ b. extremely hot.
- ☐ c. cruel.
- ☐ d. cold and icy.

Enter scores for questions 1–6. Enter the total here
on the graph on page 219.

Total
Score

89 Horse Sense

The crowd stirred and whispered in awe as, on the stage, the horse slowly tapped out the beat. Everyone became tense and quiet as the number of taps neared the correct answer to the horse trainer's question. After the final tap, the horse paused, seemed to look around, and stopped. The crowd went wild!

The horse's name was Clever Hans, the Educated Horse, and he was featured in a vaudeville act in the early 1900s in Europe. When asked a complicated mathematical question by his owner, Clever Hans would tap out the correct answer with his hooves. For example, if the answer was sixty-eight, Hans would tap out six with his left hoof and eight with his right hoof. Even more remarkable, the owner would leave the room after asking the question, so there could be no secret signal between owner and horse. A mere animal seemed to be accomplishing a highly technical human skill!

It wasn't until years later that the secret of the trick was revealed. The owner had trained Clever Hans to respond to slight signals. The horse became so sensitive that he learned when to stop from the crowd's reaction. Members of the audience would unknowingly start or give some other unconscious signal when Hans reached the right answer. Modern scientists now warn against the Clever Hans syndrome, whereby researchers unwittingly give clues to their animal subjects about actions they would like to see performed!

Main Idea

	Answer	Score
Mark the <i>main idea</i>	☐ M	15
Mark the statement that is <i>too broad</i>	☐ B	5
Mark the statement that is <i>too narrow</i>	☐ N	5

- Clever Hans used audience clues to perform seemingly impossible counting tricks.
- Animals can be trained to do many tricks.
- Clever Hans used his hoofs to tap out the correct answer.

☐	_____
☐	_____
☐	_____

Score 15 points for each correct answer.

Score

Correct Matter

2 This passage is mainly about

- ☐ a. animal intelligence.
- ☐ b. mathematical skills.
- ☐ c. Clever Hans.
- ☐ d. ways to trick audiences.

Supporting

3 The Clever Hans syndrome is a danger to be avoided by

- ☐ a. audiences.
- ☐ b. researchers.
- ☐ c. veterinarians.
- ☐ d. mathematicians.

Inclusion

4 Clever Hans's real talent was

- ☐ a. his sensitivity to crowd reactions.
- ☐ b. adding large sums.
- ☐ c. standing quietly on stage.
- ☐ d. obeying his owner.

Writing

5 The first paragraph of this passage is

- ☐ a. a first-person account.
- ☐ b. a dramatic account.
- ☐ c. an understatement.
- ☐ d. a scientific finding.

Secondary

Context

6 As used in this passage, the word start means

- ☐ a. cry out.
- ☐ b. begin.
- ☐ c. applaud.
- ☐ d. jerk.

Enter scores for questions 1–6. Enter the total here
in the graph on page 219.

Total
Score

90 Our Inner Senses

If we had to rely on only five senses for survival, we would be in very sad shape indeed. We wouldn't know up from down. We wouldn't know when to eat or drink. We wouldn't know what our muscles were doing or what position our limbs were in. We wouldn't know when our body was damaged, because we wouldn't feel pain. We might freeze to death without even a shiver or overheat without a drop of sweat. The five senses—touch, taste, smell, hearing, and sight—respond only to stimulation from the outside world, but the inside world of our bodies must also receive and respond to important messages.

Our internal senses keep us alive and enable us to use our external senses. In effect, the internal senses tell our brains how to run our bodies. Hunger and thirst register in a part of the brain called the hypothalamus when a lack of food chemicals is detected in the blood.

Another internal sense that controls our balance is maintained by three fluid-filled loops in the inner ear. Changes in position and gravity affect the motion of this liquid and trigger changes in the brain. A sense called kinesthesia lets us know the relative positions of parts of our bodies. Even our breathing is triggered by a sense that identifies an overabundance of carbon dioxide and a lack of oxygen in the blood.

No one has been able to count the number of internal senses. The presence of delicate internal senses shows just how marvelously complex we human beings are.

Main Idea

1

Mark the *main idea*

Mark the statement that is *too broad*

Mark the statement that is *too narrow*

Answer

Score

M

15

B

5

N

5

- Many things are needed to make our bodies work right.
- Our bodies are controlled by internal senses as well as by the five external senses.
- The internal senses control balance and breathing.

☐

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☐

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☐

—

Score 15 points for each correct answer.

Score

Matter

2 This passage deals mostly with the

- ☐ a. internal senses.
- ☐ b. sense of balance.
- ☐ c. five senses.
- ☐ d. brain's function.

Meaning

3 Hunger is caused by

- ☐ a. too much food and water in the body.
- ☐ b. a lack of oxygen in the blood.
- ☐ c. seeing or thinking about food.
- ☐ d. a lack of certain chemicals in the blood.

Conclusion

4 The passage implies that there are many senses we

- ☐ a. can use only in emergencies.
- ☐ b. may not understand at present.
- ☐ c. never realize we have.
- ☐ d. do not actively use in everyday living.

Meaning

5 In the second paragraph, the term "in effect" means

- ☐ a. in fact.
- ☐ b. it is doubtful.
- ☐ c. without reason.
- ☐ d. often.

Meaning

6 Register in this passage most nearly means

- ☐ a. ignite.
- ☐ b. activate.
- ☐ c. signal.
- ☐ d. revise.

Enter scores for questions 1–6. Enter the total here. Total
on the graph on page 219. Score

Main Matter

2 This passage is mostly about

- ☐ a. how small countries came to be.
☐ b. three small countries in Europe.
☐ c. special products that only small countries produce.
☐ d. small countries situated within mountain ranges.

Starting

3 Andorra is known for

- ☐ a. skiing.
☐ b. gambling.
☐ c. low taxes.
☐ d. business headquarters.

Conclusion

4 This passage leads the reader to believe that one of Grace Kelly's children will probably

- ☐ a. get into trouble with the law.
☐ b. move to the United States.
☐ c. give up the throne.
☐ d. become ruler of Monaco.

Ending

5 The writer shows that these small countries are all different by

- ☐ a. giving facts about them.
☐ b. telling about their governments.
☐ c. explaining the characteristics of their citizens.
☐ d. comparing them to San Marino and Vatican City.

Summary

Context

6 In this passage flock means

- ☐ a. stampede.
☐ b. move like sheep.
☐ c. go in large numbers.
☐ d. travel.

Enter your scores for questions 1–6. Enter the total here
 on the graph on page 219.

Total
 Score

91 Countries in Miniature

Did you know that, besides larger places like France and Germany, Europe is home to several extremely tiny countries? One contains less than a square mile of land. Another is surrounded on all sides by Italy. Yet each is an independent land, with its own government, trade, and customs.

One of the best known of these little countries is Monaco. It is situated on the Mediterranean Sea and surrounded by France on three sides. Monaco became familiar to Americans when its ruler, Prince Rainier, married the actress Grace Kelly. Rainier's family has ruled Monaco almost continuously since 1297. The land has been independent for over three hundred years. Tourists flock to this tiny country of .75 square miles to enjoy its beautiful harbor and to gamble in its casino.

Andorra, at almost 200 square miles, is considerably larger than Monaco. This country is located in the Pyrenees Mountains, with France on one side and Spain on the other. Potatoes and tobacco are grown in Andorra's steep mountain valleys. One of the products it exports is clothing. Andorra is also known for its excellent skiing locations.

Within the Alps in Central Europe is Liechtenstein, a tiny country of about 30,000 people who speak mostly German. Liechtenstein uses the same money as its neighbor Switzerland, but it has been an independent country since the 1860s. Taxes are low, so many businesses have their headquarters here. The country makes and exports much machinery.

Other small, independent states in Europe are San Marino, Vatican City, and Luxembourg. Each of these has unique qualities as well.

Main Idea

1

	Answer	Score
Mark the <i>main idea</i>	☒ M	15
Mark the statement that is <i>too broad</i>	☒ B	5
Mark the statement that is <i>too narrow</i>	☒ N	5
a. Europe has several tiny countries.	☐	___
b. The tiny countries in Europe have distinct characteristics and customs.	☐	___
c. A small country may be surrounded on all sides by a larger country.	☐	___

Subject Matter

Supporting Details

Conclusion

Clarifying Devices

Vocabulary in Context

Add your score
and on the gr

92 Take a Ride on the Interstate

The United States has one of the best highway systems in the world. Interstates connect just about every large and mid-sized city in the country. Did you ever wonder why such a complete system of excellent roads exists?

For an answer, you would have to go back to the early 1920s. In those years just after World War I, military men wanted to build an American highway system for national defense. Such a system could, if necessary, move troops quickly from one area to another. It could also get people out of cities in danger of being bombed. So-called roads of national importance were designated, but they were mostly small country roads. In 1944, Congress passed a bill to upgrade the system but did not fund the plan right away.

In the 1950s, the plan began to become a reality. Over \$25 billion was allocated, and construction began on about 40,000 miles of new roads. The idea was to connect the new system to existing expressways and turnpikes, such as the Merritt Parkway in Connecticut and the Pennsylvania Turnpike. And though the system was built mostly to make car travel easier, defense was not forgotten. For instance, highway overpasses had to be high enough to allow trailers carrying military missiles to pass under them.

By 1974, the system was mostly completed. (A few additional roads would come later.) Quick and easy travel between all parts of the country was now possible.

Main Idea

1

	Answer	Score
Mark the <i>main idea</i>	☒ M	15
Mark the statement that is <i>too broad</i>	☐ B	5
Mark the statement that is <i>too narrow</i>	☐ N	5

- a. The excellent interstate system in the United States took many years to plan and build. ☐
- b. Good highways are a necessity for efficient transportation. ☐
- c. The interstate highway system took over \$25 billion to build. ☐