

51 Leaf-Cutters

A clean dirt path several inches wide is a sign that you are near a leaf-cutter ant colony. In one direction the path branches into trails that end at a tree trunk or peter out in the grass. In the other direction it leads to the colony's nest—a wide area marked by holes and large rubbish heaps.

The holes are entrances to the underground nest. The rubbish heaps are piles of old, dry plant matter that was cleared out of the nest when it was no longer useful. Leaf-cutters are farmers, and they use leaves and grass to grow their food—fungi. Fungi are plants that grow on other plants or on decaying matter. Toadstools and molds are types of fungi. At night the ants go out to forage for more material to grow food. Each ant carries a piece of leaf at least twice as large as its own body.

Leaf-cutters come in all sizes, and, oddly enough, it is the largest ones who do the least work. They are soldiers, whose main job is to protect the nest. They have enormous jaws. Because of this, the native Indians of South America, where these ants are found, put them to an odd use. Instead of using stitches to close a wound, the Indians hold large leaf-cutter ants up to the edges of a cut and let them bite it together. Then they pinch off the bodies, leaving the jaws behind to hold the wound firmly closed.

Main Idea

1

Mark the *main idea*

Answer

Score

M

15

Mark the statement that is *too broad*

B

5

Mark the statement that is *too narrow*

N

5

- a. The leaf-cutters are farmers that grow their food in dead plant material.
- b. Leaf-cutter ants work hard to survive.
- c. Leaf-cutters carry grass and leaves to their nests.

Score 15 points for each correct answer.

Score

- Subject Matter** 2 This passage is about
- a. fungi.
 - b. leaf-cutter ants.
 - c. South American Indians.
 - d. farming.

- Supporting Details** 3 Leaf-cutter ants eat
- a. bark from tree trunks.
 - b. fungi.
 - c. leaves and grass.
 - d. decaying matter.

- Conclusion** 4 This passage implies that
- a. leaf-cutter ants work harder than other ants.
 - b. leaf-cutter ants are small.
 - c. the largest ants do not help grow food for the colony.
 - d. anyone can find a leaf-cutter colony.

- Clarifying Devices** 5 The phrase "oddly enough" indicates
- a. from a human point of view it's strange that the strongest ants do the least work.
 - b. small ants are lazy when compared with the larger ones.
 - c. the ants vary in size tremendously, depending on their jobs.
 - d. that it's odd that leaf cutters come in all sizes.

- Vocabulary in Context** 6 To forage means to
- a. plant.
 - b. work.
 - c. search.
 - d. beg.

Add your scores for questions 1-6. Enter the total here and on the graph on page 217.

Total Score

52 A Hard and Beautiful Mineral

What is the world's hardest natural substance? If you guessed something like iron or marble, you would be wrong. The world's hardest substance is actually the diamond.

Diamonds are formed deep in the earth and hardened by the intense heat and pressure found there. That pressure pushes the diamond material up near the surface into outlets called pipes. There the material cools off, and from there diamonds can be mined.

To bring out a diamond's brilliance, the stone must be cut and polished. The most valuable diamonds are clear—there are no dull spots in them. They are also colorless. (A few diamonds are pink or some other color, but these are rare and very expensive.) Valuable diamonds are fairly large, at the very least one carat in weight. And they are also well cut. This means they have even-sided faces, or facets, that reflect light clearly and evenly.

If diamonds are so hard, what is used to cut them? You guessed it: other diamonds. Many factories also use diamonds to cut other hard substances. Diamonds are used in polishing as well. Polishing material made of diamond particles can be used like sandpaper. It can make steel surfaces so smooth that they reflect like fine mirrors.

The world has always valued diamonds. People have fought over them, and curses have been placed on them. They are a symbol of power as well as love.

Main Idea	1	Answer	Score
	Mark the <i>main idea</i>	<input type="checkbox"/> M	<u>15</u>
	Mark the statement that is <i>too broad</i>	<input type="checkbox"/> B	<u>5</u>
	Mark the statement that is <i>too narrow</i>	<input type="checkbox"/> N	<u>5</u>

- a. Diamonds are the world's hardest natural substance.
- b. Diamonds are valued for their hardness, beauty, and use in industry.
- c. A clear diamond is a valuable diamond.

Score 15 points for each correct answer.

Score

- Subject Matter** 2 Another good title for this passage would be
- a. How to Mine Diamonds.
 - b. Diamonds: Beautiful and Useful.
 - c. A Diamond in the Rough.
 - d. Diamonds and Other Precious Stones.

- Supporting Details** 3 For diamonds to be valuable, they must be
- a. pink.
 - b. not more than one carat.
 - c. pear-shaped.
 - d. well cut.

- Conclusion** 4 The diamonds used in industry are
- a. harder than those used as gemstones.
 - b. of lower quality than those used as gemstones.
 - c. extremely large.
 - d. later used as gemstones.

- Clarifying Devices** 5 Surfaces polished by diamonds are compared to
- a. stones.
 - b. fine mirrors.
 - c. carats.
 - d. pipes.

- Vocabulary in Context** 6 The word carat refers to a type of
- a. food.
 - b. diamond.
 - c. brightness.
 - d. weight.

Add your scores for questions 1–6. Enter the total here and on the graph on page 217.

Total Score