Name _____ Date _____

Instructions: Read each question carefully and choose the best answer.

1. In which field would biomimicry most likely be studied?
   - Ⓐ sanitation
   - Ⓑ recreation
   - Ⓒ farming
   - Ⓓ engineering

2. How did wearing swimsuits that mimicked sharkskin affect swimmers at the 2000 Olympic Games?
   - Ⓐ The swimmers suffered small cuts on their skin.
   - Ⓑ The swimmers lost half of their races.
   - Ⓒ Eighty percent of the swimmers won medals.
   - Ⓓ There were no noticeable effects.

3. A synonym for *living things* is _____.
   - Ⓐ biomimicry
   - Ⓑ resources
   - Ⓒ organisms
   - Ⓓ biologists

4. The author's attitude about the benefits of biomimicry can best be described as _____.
   - Ⓐ optimistic
   - Ⓑ skeptical
   - Ⓒ surprised
   - Ⓓ undecided

5. What did Georges de Mestral invent after going for a walk through a field in 1941?
   - Ⓐ reflectors
   - Ⓑ roof tiles
   - Ⓒ artificial leaves
   - Ⓓ Velcro

6. What do termite mounds and the Eastgate Centre in Zimbabwe have in common?
   - Ⓐ a complex system of tunnels and vents for cooling
   - Ⓑ the ability to attach things together
   - Ⓒ tiny bumps that cause water to bead up and roll off
   - Ⓓ tiny grooved scales for smooth gliding

Name _____ Date _____

7. What is most likely the reason the author included the section "The Future of Biomimicry"?

Ⓐ He believes humans can't learn to take better care of Earth.

Ⓑ He believes humans can't learn a lot from plants and animals.

Ⓒ He believes the science of biomimicry can cause many problems for humans.

Ⓓ He believes that people can learn a lot from plants and animals and that biomimicry can solve many of humans' environmental issues.

8. Which word means *a community of living things together with their habitat?*

Ⓐ technology

Ⓑ ecosystem

Ⓒ resource

Ⓓ organism

9. When something **adapts** to a new situation, it _____.

Ⓐ is thrown away or rejected

Ⓑ decays or rots

Ⓒ changes to fit a new situation or environment

Ⓓ becomes some other living organism

10. What is unique about spider silk?

Ⓐ Spiders work together to create silk.

Ⓑ It is three times stronger than steel.

Ⓒ It is the stickiest substance created by animals.

Ⓓ Spider silk is used by other animals besides spiders.

11. **Extended Response:** What is the author's opinion about biomimicry? Use at least three details from the book to support you answer. Then, describe your own opinion about biomimicry.

12. **Extended Response:** Choose two of the examples of biomimicry from the book. Compare and contrast the two to persuade someone that one has greater benefits than the other.

1. Ⓓ *Main Idea and Details*

2. Ⓒ *Cause and Effect*

3. Ⓒ *Vocabulary*

4. Ⓐ *Author's Point of View*

5. Ⓓ *Sequence Events*

6. Ⓐ *Compare and Contrast*

7. Ⓓ *Author's Point of View*

8. Ⓑ *Vocabulary*

9. Ⓒ *Vocabulary*

10. Ⓑ *Main Idea and Details*

11. Answers will vary but should express the author's feelings that biomimicry is a useful way for humans to solve problems without making a bigger problem and that nature supplies us with answers that are both simple and good for the environment. Students should find at least three details from the book that reflect subjectivity on the author's part, such as the following: *people don't consider the impact of our own discarded materials, nature wastes nothing and produces few harmful by-products, nature's answers are less costly and wasteful,* and so on. Finally, the answer will conclude with the student's own opinions about biomimicry.

12. Answers will vary but should begin with a description of both examples of biomimicry and then state an opinion about which is more interesting. For example: *Both a cat's eye and a moth's eye inspired ways to help humans see things. A cat's eye helped find a way to make roads brighter and safer by increasing the amount of light that is produced. A moth's eye helped make computer screens easier to look at by reducing the amount of light that is produced. The cat's eye is a more interesting example of biomimicry; it helps to keep drivers safe.*