Directions: Read the story. Then answer the questions about the story.

William's Windmill

The thirsty cornstalks rattled in the wind. The drought was so bad that William's family could not grow enough corn. Soon there was not enough money to send William to school anymore.

Instead of abandoning his dream of studying science, William made the village library his classroom. He was excited when he found a book about windmills, complete with diagrams. Wind was one thing his village always had in great supply! If William could build a windmill, he could bring electricity to his family's home and power a pump to get water from their well to the fields. William decided then and there that he would find a way to build one.

When the windmill was finally ready, a crowd of curious people gathered to watch William climb his tower and unlock the giant wheel. It began to move ever so slowly at first but soon picked up speed, spinning in the stiff breeze.

"The boy has done it," someone should joyfully. Within weeks, there was water flowing to the village crops. William knew he would be going back to school where he would learn to make even more amazing things.

What happens in the beginning of the story?

- A Curious people watch William.
- ^(B) William climbs a windmill tower.
- © There is not enough water in William's village.
- William finds a book with a diagram of a windmill.

- 2 What is the theme of the story?
 - A People should work together for change.
 - ^(B) One person can make a big difference.
 - © Hardship makes people stronger.
 - D Water is a precious resource.

Name

GO ON

Unit Test

Name.

Unit Test

Directions: Read the article. Then answer the questions about the article.



Jacqueline Cochran (1910-1980) grew up in Florida with very little money. As a teenager, she started working in beauty shops, where she learned about hair dyes and makeup. This led to a job in a beauty salon in New York City. There, Cochran met a man named Floyd Odlum.

Cochran told Odlum her dream of becoming a traveling makeup saleswoman. He thought Cochran's idea might work, but only if she covered a lot of territory. That meant flying. On a dare, Odlum suggested that he would pay for flying lessons if Cochran could earn her pilot's license in six weeks.

It turned out that Cochran loved flying so much that she had her pilot's license in half that time! Soon she began racing planes. Over time, Cochran earned more speed, altitude, and distance records than any other pilot before her.

After World War II began, Cochran persuaded President Franklin D. Roosevelt to allow women to help by flying military planes. She was the first woman to break the sound barrier. Along with her close friend Amelia Earhart, Cochran became one of the two most famous female pilots in the world.

Cochran described her life as a journey from "sawdust to stardust." She married Floyd Odlum, but it was accepting his challenge that truly changed her future.



- 3 How did Floyd Odlum influence Jacqueline Cochran's future?
 - A He helped her move out of Florida.
 - ^(B) He encouraged her to follow her dream of becoming a traveling saleswoman.
 - © He dared her to earn her pilot's license.
 - D He introduced her to Amelia Earhart.
- What did Jacqueline Cochran and Amelia Earhart have in common?
 - A They learned to fly together.
 - ^(B) They were famous female pilots.
 - © They both met with President Roosevelt.
 - D They competed against each other to break flying records.
- 5 How were the ideas of flying and becoming a traveling saleswoman related?
 - A pilot could teach women in the military about makeup.
 - B A pilot and a saleswoman required similar skills.
 - © A traveling saleswoman needed to get from place to place.
 - D A traveling saleswoman who could fly would draw attention.

6 Cochran helped convince President Roosevelt to let women —

Unit Test

- A help fly military planes.
- ^(B) earn their pilot's licenses.
- ${}^{\rm C}$ set altitude and distance records.
- D take flying lessons during the war.
- As a result of learning to fly and even race planes, what important "first" did Jacqueline Cochran achieve?
 - She became the first woman to become a pilot.
 - ^(B) She was the first female pilot to run for President.
 - © She became the first traveling saleswoman.
 - She became the first woman to break the sound barrier.



Directions: Read the article. Then answer the questions about the article.



Scientists often face difficult problems, but what can experts do when a puzzle seems unsolvable? The answer for one group was to play a game!

These particular scientists had a protein problem. Proteins are an important part of all living things. By figuring out how proteins are shaped and how they fit together, scientists can learn how to help fight diseases.

Proteins fit together like pieces of a 3-D jigsaw puzzle, twisting and folding, something like a phone cord. The proteins that these scientists were working with were so tiny and detailed, it was difficult to figure out how they "fold" together. The scientists decided to go to the Center for Game Science, a place where people create games to solve problems. The idea is that if a game is played by a lot of people competing and sharing, someone will come up with a solution.

That is how the game Foldit came to be. The game was designed so that anyone could play. All a player had to do was go online at the Foldit Web site. The player was then given a protein model to fold and shape. Based on how good the end construction was, the player was given a score.

As people played Foldit, they could share and improve on each other's models to solve the protein problem. Their scores were posted, and soon thousands of players from all over the world were playing. Everyone was cooperating and competing at the same time.

It took just ten days to solve the protein puzzle that had baffled scientists for years.

GO ON



Name

- 8 In this article, having a difficult science problem led to the creation of
 - (A) a new Web site.
 - ^(B) a cure for a disease.
 - © a 3-D jigsaw puzzle.
 - D a game called Foldit.
- 9 How did the people at the Center for Game Science help the scientists?
 - A They studied proteins together.
 - ^B They competed with the scientists.
 - © They designed a game to solve a problem.
 - D They discovered a protein.

10 How were the people playing Foldit able to help the scientists studying proteins?

Unit Test

- They helped create a game for the scientists to use.
- ^(B) They helped the scientists discover how proteins fit together.
- © They made protein puzzles for the scientists.
- D They enlarged the proteins so the scientists could study them better.
- What was the key to solving the protein puzzle in just ten days?
 - (A) giving each player a score
 - [®] having thousands of players
 - \bigcirc getting players to visit a Web site
 - D having scientists design the game

12

How did Foldit help the scientists solve their protein problem? Use details from the article to support your answer.



Unit Test

Directions: Read the passage. Then answer the questions about the passage.



Brainstorming is a great way to come up with lots of ideas. Once you have "stormed" up plenty of ideas, you can choose the best one.

Getting Started

Name

First, identify the topic or problem, and write it so that everyone can see it. (For example: Where should we take a class field trip?) Then set ground rules by telling everyone to:

- Welcome all ideas, no judging allowed.
- Come up with as many ideas as possible.
- Try to think of unusual or wild ideas.
- Feel free to build on one another's ideas.

Next, set a limit, either on the time spent brainstorming or the total number of ideas. Finally, ask one person to record the ideas.

Let the Ideas Flow

Now you're ready to let the brainstorming begin! Have people say their ideas out loud while the recorder writes them down. Remember that it's all right to laugh and enjoy yourselves. All ideas are welcome. Write them all down, whether they seem like good ideas or not.

Results

When the time is up, choose the five ideas that the group likes best. Then write down five ways to judge the ideas. (For example: It should be something everyone can do.) Give each of the ideas a score from 0 to 5 for the number of rules they meet. The idea with the highest score wins!



- 13 According to the article, which of these comes first when brainstorming?
 - (A) Set a time limit.
 - [®] Score the ideas.
 - © Explain the rules.
 - Decide on the topic or problem.
- What is the last thing you do with the best ideas?
 - (A) Record all of them.
 - [®] Say them out loud.
 - © Judge each of them.
 - D Choose five of them.
- (15) "Solving a Protein Puzzle" has a text structure that presents a problem and a solution, but "Brainstorming" has a text structure that —
 - (A) makes a comparison.
 - [®] describes a procedure.
 - © shows cause and effect.
 - D relates ideas that are alike.

- 16 The game Foldit and brainstorming are both tools for
 - (A) curing disease.
 - [®] creating puzzles.
 - \bigcirc teaching science.
 - **D** solving problems.
- Both "Solving a Protein Puzzle" and "Brainstorming" give information about —
 - (A) building proteins.
 - $^{\textcircled{B}}$ working together.
 - $^{\scriptsize (\!C\!)}$ understanding science.
 - D comparing new ideas.

18

Explain what is similar about the game Foldit and the process of brainstorming. Give examples or details to support your explanation.



DONE!

