Name: Date: Score: / 6

The Bridge Builders: Comprehension

Fiction story · about 270 words

Read the story. Then answer each question. Circle the best answer or write your answer on the lines.

The Bridge Builders

Every spring, the creek behind Carver Elementary flooded and washed out the old wooden footbridge. Students who lived in the neighborhood across the creek had to walk an extra mile around by the road, which had no sidewalk.

Ms. Okonkwo's fifth-grade class decided to do something about it. "Engineers solve problems like this," she said. "Let's think like engineers."

First, they defined the problem. The bridge needed to be strong enough for several students at once, high enough to stay above floodwater, and cheap enough for the school to afford. They measured the creek: twelve feet wide. They interviewed the custodian, who said the water rose about three feet during floods.

Next, teams designed models using craft sticks and glue. One team built a flat beam bridge. Another tried an arch. A third team, led by a quiet boy named Andre, built a truss bridge with triangles along the sides. They tested each model by stacking weights on it until it broke. The beam bridge held 4 pounds. The arch held 9. Andre's truss bridge held 15.

"Why do triangles work so well?" someone asked. Ms. Okonkwo explained that triangles don't change shape when pushed, so they spread force evenly.

The class presented their truss design to the school board, along with their data and a budget. A local construction company was so impressed that it offered to build the bridge for free, using the class's design.

On the first day of fall, students crossed the new bridge on their way to school. Attached to the railing was a small metal plate: "Designed by the Engineers of Room 14."

1. **Main idea:** What is the story mostly about?

   A. a boy wins a science fair B. a class uses the engineering process to design a new bridge C. a creek floods a town D. a construction company builds a school

2. **Detail:** Why did students need a new bridge?

   A. The creek dried up. B. The road was closed. C. They wanted a faster way to the store. D. The old one washed out every spring.

3. **Detail:** How much did the water rise during floods?

   A. ten feet B. one inch C. about twelve feet D. about three feet

4. **Detail:** Which design held the most weight?

   A. they all held the same B. the arch bridge C. the truss bridge D. the beam bridge

5. **Inference:** Why do triangles make bridges strong?

   A. They are pretty. B. They do not change shape when pushed and spread force evenly. C. They are light. D. They use more glue.

6. **Sequence:** What happened after the class presented to the school board?

ANSWER KEY

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