

Reading Comprehension: The Wind Turbine Project - Answer Key

5th Grade - passage comprehension and inference | 20 minutes

Read the passage:

The fifth graders at Hill School wanted to power the new garden lights without using the grid. Their teacher, Mr. Banks, split the class into teams to test small wind turbines. One team built large, heavy blades, certain that bigger would catch more wind. Another team used short, light blades. When they tested both with a classroom fan, the light blades spun quickly and lit the bulb, while the heavy blades barely moved. The students realized the heavy blades needed far more wind than a fan could give to start turning. The two teams combined their ideas, keeping the blades light but adding a third blade for balance. On the windiest day that fall, the garden lights glowed for the first time, powered entirely by the wind the students had learned to capture.

Read the passage. Then answer each question in a complete sentence, using evidence from the text.

1. What goal did the fifth graders have?

Answer: To power the new garden lights without using the grid.

2. How were the two teams' blade designs different?

Answer: One team used large, heavy blades; the other used short, light blades.

3. What happened when they tested the blades with a fan?

Answer: The light blades spun quickly and lit the bulb; the heavy blades barely moved.

4. What change did the class make after testing?

Answer: They kept the blades light but added a third blade for balance.

5. What is the main idea of the passage?

Answer: By testing designs and combining ideas, the students powered the lights with wind. (Sample answer.)

Challenge

6. Why did the heavy blades barely move during the test? Use the text.

Answer: The passage says they needed far more wind than a fan could give to start turning.