Monarch Study Detectives

Read a scientific study for evidence, methods, and limits.

6.1.f.i "obtaining, evaluating, and communicating information read scientific texts, including those adapted for classroom use, to obtain scientific and/or technical information"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the sentence that states the study's finding. Write 1 beside the sentence that explains how the comparison was kept fair, 2 beside the sentence with both monarch counts, and 3 beside the sentence that explains why the results may not represent every migration stop.

Do Native Gardens Help Monarchs?

(1) Each spring, scientists at a city park wanted to learn whether native flower gardens help monarch butterflies during migration. They chose two similar sunny areas. One area had a garden of native milkweed and nectar flowers. The other area had mowed grass nearby, but no flower garden. For six weeks, observers walked the same route in each area twice each week. They recorded every monarch seen within five meters of the route. Using the same route and distance helped make the comparison fair.

(2) Observers counted 86 monarchs in the garden area and 29 in the grass area. The larger count suggests that the garden offered useful food or shelter during the study. However, the counts do not prove that flowers alone caused the difference. Wind, temperature, or nearby plants could also have affected where butterflies flew. The team did not measure those factors. The study also took place in one park and lasted only six weeks, so its results may not represent every migration stop.

(3) To communicate the finding accurately, a student could say that monarchs were seen more often along the native garden route than along the grass route in this study. That statement names the evidence without claiming certainty about the cause. A careful reader should also notice what information is missing. The passage does not identify each flower species, the weather on observation days, or the number of individual butterflies that may have been counted more than once. Those gaps limit how broadly the result can be used.

2 ANSWER WITH EVIDENCE

Use the passage

1. What question were the scientists trying to investigate?

2. What two parts of the observation routine helped make the comparison fair?

3. What evidence supports the idea that monarchs were seen more often near the native garden?

4. Why do the counts not prove that flowers alone caused the difference? Give one reason from the passage.

3 YOUR TURN

Your own words

Write a three-sentence science update about this study. In sentence 1, state the finding using the counts. In sentence 2, describe one method detail. In sentence 3, explain one limitation without claiming that flowers proved the cause.

ANSWER KEY

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GRADE 6 · 6.1.f.i

PART 1 · READ AND MARK

Underline the sentence that states the study's finding. Write 1 beside the sentence that explains how the comparison was kept fair, 2 beside the sentence with both monarch counts, and 3 beside the sentence that explains why the results may not represent every migration stop. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What question were the scientists trying to investigate?	**They wanted to learn whether native flower gardens help monarch butterflies during migration.**
2	What two parts of the observation routine helped make the comparison fair?	**Observers used the same route and counted butterflies within the same five-meter distance in both areas.**
3	What evidence supports the idea that monarchs were seen more often near the native garden?	**Observers counted 86 monarchs in the garden area and 29 in the grass area.**
4	Why do the counts not prove that flowers alone caused the difference? Give one reason from the passage.	**The team did not measure other factors, such as wind, temperature, or nearby plants, that could have affected where butterflies flew. The study was also limited to one park for six weeks.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

In one city park study, observers saw 86 monarchs along the native garden route and 29 along the grass route. They walked the same route in each area twice a week and counted butterflies within five meters. Because the team did not measure weather or other factors and studied one park for six weeks, the results do not prove that flowers caused the difference.

Accept equivalent wording that accurately identifies the research question, comparison method, counts, and a stated limitation. For the science update, require all three requested parts and language that avoids claiming a proven cause.