

Testing a Monarch Claim

Evaluate sources and use evidence to make a science-based recommendation.

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

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline two pieces of empirical evidence, circle one detail in each source that helps you judge credibility or possible bias, and number the three sources from most to least useful for testing the fertilizer claim.

Can Fertilizer Help Monarchs?

- ① City gardeners noticed fewer monarch caterpillars in several parks. To investigate, Maya read a report from the state wildlife agency. The report described weekly counts made by trained volunteers at 24 parks during the same months for three years. It listed the counting method, dates, and limits, including that volunteers could miss tiny caterpillars. Maya considered this source credible because it named its authors, explained its evidence, and linked to the original data. Its purpose was to report findings, not sell a product.
- ② A gardening company blog made a different claim: its new fertilizer "brings monarchs back." The post showed two photographs of one flower bed, but it gave no caterpillar counts, dates, or comparison bed. The company sells the fertilizer, so its purpose could create bias. Maya did not decide that the fertilizer failed. Instead, she judged that the post did not provide enough reliable evidence for its strong claim. A source can be useful for ideas while still needing stronger evidence.
- ③ Next, Maya read a university study comparing 12 milkweed plots. Researchers randomly assigned half the plots to receive fertilizer and counted caterpillars each week for one summer. Fertilized plots had an average of 3.1 caterpillars, while other plots averaged 3.4. The study did not prove that fertilizer always reduces caterpillars, because it tested one location and one season. Still, Maya used the agency report and the university study to argue that gardeners should not buy fertilizer just because the blog promises more monarchs.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What two details make the state wildlife agency report a credible source?

2 What evidence is missing from the gardening company blog, and why could the blog be biased?

3 How did the university study make a fair comparison, and what is one limit of its results?

4 What recommendation does Maya support with the agency report and the university study?

3 YOUR TURN _____ Your own words

Write exactly four sentences for a community garden deciding whether to buy the fertilizer. State a recommendation, use evidence from at least two sources in the passage, and explain one limit or weakness in the evidence.

PART 1 • READ AND MARK

Underline two pieces of empirical evidence, circle one detail in each source that helps you judge credibility or possible bias, and number the three sources from most to least useful for testing the fertilizer claim. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What two details make the state wildlife agency report a credible source?	It named its authors, explained its counting method and limits, and linked to original data. Accept any two of these details.
2	What evidence is missing from the gardening company blog, and why could the blog be biased?	It has no caterpillar counts, dates, or comparison bed. The company sells the fertilizer, so it may benefit if people believe the claim.
3	How did the university study make a fair comparison, and what is one limit of its results?	Researchers randomly assigned half of 12 plots to receive fertilizer and compared them with plots that did not receive it. The study tested only one location and one season.
4	What recommendation does Maya support with the agency report and the university study?	Gardeners should not buy the fertilizer just because the company blog promises more monarchs.

PART 3 • YOUR TURN (SAMPLE ANSWER)

I recommend that our community garden not buy the fertilizer because the company blog gives no counts or comparison bed. The university study compared fertilized and unfertilized plots and found averages of 3.1 and 3.4 caterpillars. The wildlife agency report also used repeated counts at 24 parks. Because the university study lasted one season in one location, we should ask for more studies before making a final decision.

Accept recommendations that are supported by accurate evidence from at least two passage sources and include sound reasoning about source quality, bias, or limits. Students may recommend waiting for more evidence or not buying the fertilizer, as long as their reasoning matches the passage.