Milkweed Makes Room

Design and improve a home for monarch caterpillars

L.3.4.4 "Define and improve a solution to a problem created by environmental changes and any resulting impacts on the types of density and distribution of plant and animal populations living in the environment (e.g...."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the change to the field and its effect on caterpillars, circle what the class planted, and write 1 by the test results and 2 by the improvement plan.

A Path Through the Field

1. At the edge of a school field, workers widened a walking path. The work scraped away many milkweed plants. Monarch butterflies lay eggs on milkweed, and their caterpillars eat its leaves. Before the work, children found caterpillars in several parts of the field. Afterward, they found fewer caterpillars, mostly in one sunny corner. That corner now had most of the field's milkweed.

2. The class set a goal: help monarch caterpillars live in more parts of the field. They planted six milkweed plants in each of two same-size patches beside the path. One patch was sunny. The other was shaded by a fence. The class put small signs near both patches so feet would not crush the new plants. Then they waited for the plants to grow.

3. A month later, the class counted five caterpillars in the sunny patch and one in the shady patch. The sunny patch had more caterpillars in the same amount of space. Caterpillars were still not spread evenly across the two patches. The class decided to add six milkweed plants in a new sunny patch farther down the path. They would count again next month to see if caterpillars spread to more places.

2 ANSWER WITH EVIDENCE

Use the passage

1. What change caused a problem for the caterpillars? How did it change where the children found them?

2. What did the class plant to help the caterpillars? How did the class protect the new plants?

3. What do the counts tell you about how crowded the caterpillars were in the two same-size patches?

4. What change did the class plan to help caterpillars spread? How would they check if it worked?

3 YOUR TURN

Your own words

A roof now blocks rain from one school garden bed. Earthworms are found only in the damp bed. In 3 or 4 sentences, name the problem, tell what you would change to help worms live in both beds, explain how you would test your change, and say how you might improve it if few worms move in.

ANSWER KEY

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GRADE 3 · L.3.4.4

PART 1 · READ AND MARK

Underline the change to the field and its effect on caterpillars, circle what the class planted, and write 1 by the test results and 2 by the improvement plan. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What change caused a problem for the caterpillars? How did it change where the children found them?	**Widening the path scraped away milkweed. The children found fewer caterpillars, mostly in one sunny corner instead of several parts of the field.**
2	What did the class plant to help the caterpillars? How did the class protect the new plants?	**The class planted milkweed in two patches and put up signs to keep feet from crushing the plants.**
3	What do the counts tell you about how crowded the caterpillars were in the two same-size patches?	**The sunny patch had more caterpillars in the same amount of space: five, compared with one in the shady patch.**
4	What change did the class plan to help caterpillars spread? How would they check if it worked?	**The class planned to plant milkweed in a new sunny patch farther down the path. They would count caterpillars again next month to see if they were in more places.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

The covered bed is too dry, so few earthworms live there. I would add leaves to that bed and water it to keep the soil damp. After two weeks, I would count earthworms in the same-size part of each bed. If the covered bed still had few worms, I would water it more often and count again.

Accept changes that keep the covered bed moist without harming the worms. A complete response includes a way to compare worm numbers in the two beds and a specific improvement based on the results.