Pill Bug Detectives

Use observations to form scientific questions and problems.

5.1.A "ask questions and define problems based on observations or information from text, phenomena, models, or investigations;"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each observation that gives evidence. Circle each question or problem that grows from those observations.

A Moisture Mystery

1. During recess, Maya noticed pill bugs under damp leaves beside the school garden. In a dry patch of soil a few steps away, she found none. She wondered whether the animals were choosing a wetter place or simply hiding from light. An observation is something Maya sees or measures. Her two locations gave her information that could lead to a testable question.

2. Before testing, Maya decided to keep several things the same. She would use two same-size containers, place a moist paper towel and a dry towel in each container, and keep both containers dark. She would put five pill bugs in each container and count which towel they used after ten minutes. This plan focuses on one condition, moisture, while limiting other differences.

3. After ten minutes, four pill bugs were on the moist towel and one was on the dry towel in the first container. The same pattern appeared in the second container. Maya could ask, "Do pill bugs spend more time in moist places than in dry places?" She could also define a problem for a longer investigation: find out whether moisture changes where pill bugs stay over time.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which two observations made Maya wonder about moisture and light?

2. What problem was Maya's plan designed to investigate?

3. Name one condition Maya kept the same. Explain why keeping it the same helps her focus on moisture.

4. Write the testable question Maya could ask after seeing her results in paragraph 3.

3 YOUR TURN

Your own words

Choose a safe everyday event you can observe at school or home. Write two observations, then write one testable question and one problem you could investigate based on those observations.

ANSWER KEY

Pill Bug Detectives

GRADE 5 · TEKS 5.1.A

PART 1 · READ AND MARK

Underline each observation that gives evidence. Circle each question or problem that grows from those observations. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which two observations made Maya wonder about moisture and light?	**She found pill bugs under damp leaves, but she found none in a nearby dry patch of soil.**
2	What problem was Maya's plan designed to investigate?	**It was designed to find out whether moisture affects where pill bugs stay or which towel they use.**
3	Name one condition Maya kept the same. Explain why keeping it the same helps her focus on moisture.	**Answers may name same-size containers, darkness, or five pill bugs in each container. Keeping other conditions the same makes moisture the main difference being tested.**
4	Write the testable question Maya could ask after seeing her results in paragraph 3.	**Do pill bugs spend more time in moist places than in dry places?**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I observed that the water fountain line was longer just after recess than before recess. I also observed that many students arrived at the fountain at the same time. My question is, “Does recess ending affect the length of the water fountain line?” My problem is to find out what makes the fountain line longer.

Accept observations that are specific and could be seen or measured. Accept a question and problem that clearly connect to the student's observations and could be investigated safely.