

Evidence Detectives

Use observations to support a reasonable scientific answer.

SC.4.N.1.4 "Attempt reasonable answers to scientific questions and cite evidence in support."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline Maya's scientific question, circle her prediction, and number the three pairs of counts that give evidence for her conclusion.

Where Do Pill Bugs Go?

- ① During recess, Maya noticed pill bugs under a damp flowerpot. She wondered, "Do pill bugs choose damp places more often than dry places?" This was a scientific question because Maya could test it by making observations. Her first answer was a prediction: pill bugs would gather more often on the damp side of a container. She needed evidence before deciding whether her answer was supported.
- ② To collect evidence, Maya placed ten pill bugs in the center of a container. One half held a damp paper towel, and the other half held a dry paper towel. She covered the container loosely so the bugs had shade, then counted the bugs on each side after ten minutes. Maya repeated the test three times, using the same number of bugs and the same container each time.
- ③ In all three tests, more pill bugs were on the damp towel than on the dry towel. Maya's counts were 7 and 3, then 8 and 2, then 6 and 4. These observations supported her prediction, but they did not prove that every pill bug always chooses dampness. A reasonable conclusion was that, in this test, pill bugs chose the damp side more often. Additional tests could strengthen the evidence.

2 ANSWER WITH EVIDENCE Use the passage

1 What scientific question did Maya test?

2 Give one pair of counts that supports Maya's prediction. Tell which count was for the damp side and which was for the dry side.

3 Did Maya's evidence prove that every pill bug always chooses dampness? Use information from the passage to explain.

4 Write a reasonable conclusion Maya could make. Include one piece of evidence from her test.

3 YOUR TURN Your own words

Write a testable question about two ways to melt an ice cube. Give a reasonable predicted answer and name one measurement you would collect as evidence.

PART 1 • READ AND MARK

Underline Maya's scientific question, circle her prediction, and number the three pairs of counts that give evidence for her conclusion. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What scientific question did Maya test?	Do pill bugs choose damp places more often than dry places?
2	Give one pair of counts that supports Maya's prediction. Tell which count was for the damp side and which was for the dry side.	Answers may give 7 damp and 3 dry, 8 damp and 2 dry, or 6 damp and 4 dry.
3	Did Maya's evidence prove that every pill bug always chooses dampness? Use information from the passage to explain.	No. The observations supported her prediction in this test, but they did not prove what every pill bug always chooses.
4	Write a reasonable conclusion Maya could make. Include one piece of evidence from her test.	In this test, pill bugs chose the damp side more often. For example, 8 pill bugs were on the damp side and 2 were on the dry side.

PART 3 • YOUR TURN (SAMPLE ANSWER)

My question is, "Does an ice cube melt faster on a metal spoon or a wooden spoon?" I predict it will melt faster on the metal spoon. I would measure how many minutes each ice cube takes to melt.

Accept equivalent scientific questions, reasonable predictions, and a clear measurement or observation that could provide evidence. Predictions do not need to be correct, but they must match the student's question.