

Evidence Under Leaves

Use observations to evaluate a scientific explanation.

SC.5.N.2.1 "Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the observations Maya recorded. Circle the sentence that links those observations to an explanation, so you can see how evidence supports a scientific claim.

Do Pill Bugs Prefer Damp Places?

- ① On a cloudy morning, Maya noticed pill bugs under wet leaves near the school garden. She wondered whether pill bugs choose damp places. A scientific question like hers can be tested. Maya could observe pill bugs in two kinds of places, record what happens, and use those observations as evidence for an explanation about their behavior.
- ② She placed ten pill bugs in the center of a tray. One half held a damp paper towel, and the other half held a dry paper towel. Both sides were shaded, and Maya counted the pill bugs on each side every minute for ten minutes. Keeping light and tray size the same helped her test moisture rather than another difference.
- ③ During most counts, seven or eight pill bugs were on the damp towel, while two or three were on the dry towel. These repeated observations support Maya's explanation that pill bugs preferred the damp side in this test. The results do not prove that every pill bug always chooses moisture. Another student could repeat the test and compare results.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What testable question did Maya investigate?

2 What repeated observation gave Maya evidence for her explanation?

3 Why did Maya keep the light and tray size the same?

4 Why do Maya's results not prove that every pill bug always chooses moisture?

3 YOUR TURN _____ Your own words

Write three sentences that plan a fair test about a living thing. State a testable question, describe what you would keep the same and observe, and explain how the observations could support an explanation.

PART 1 • READ AND MARK

Underline the observations Maya recorded. Circle the sentence that links those observations to an explanation, so you can see how evidence supports a scientific claim. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What testable question did Maya investigate?	She investigated whether pill bugs choose damp places.
2	What repeated observation gave Maya evidence for her explanation?	During most counts, seven or eight pill bugs were on the damp towel, and two or three were on the dry towel.
3	Why did Maya keep the light and tray size the same?	Keeping them the same helped her test the effect of moisture instead of another difference.
4	Why do Maya's results not prove that every pill bug always chooses moisture?	The results came from one test with ten pill bugs. Another student could repeat the test and compare results.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Do bean seedlings grow taller with 8 hours of light each day than with 2 hours? I would grow equal numbers of the same kind of seedlings in identical pots, using the same soil and water, and measure their heights after two weeks. If the 8-hour group has a greater average height, those measurements would support the explanation that, under these conditions, more light helped the seedlings grow taller.

Accept answers that identify observations as evidence and connect that evidence to an explanation limited to this test. For Your Turn, accept reasonable testable questions with a controlled comparison, observations or measurements, and a conditional evidence-based explanation.