

Pill Bug Detectives

Ask, observe, and explain a natural-world question.

SC.2.N.1.1 “Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the question the team investigated. Circle the sentence that tells how they checked the tray at regular times, and put a box around the sentence that gives their explanation.

A Damp or Dry Choice?

- ① At recess, Maya saw small pill bugs under a damp log. Her team asked, “Do pill bugs choose damp places or dry places?” First, they gently looked in the garden and noticed pill bugs under leaves, stones, and logs.
- ② Next, the team put one dry paper towel and one damp paper towel in a tray. They placed five pill bugs in the middle. They watched quietly for five minutes and counted how many bugs were on each towel every minute.
- ③ The team wrote each count in a notebook. Most counts showed more pill bugs on the damp towel. They explained that pill bugs may choose damp places because they found more bugs there. Then they returned the bugs to the garden.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What question did Maya's team investigate?

2 How did the team make systematic observations?

3 What observation helped the team explain that pill bugs may choose damp places?

3 YOUR TURN

Your own words

Plan a safe team investigation about whether more ants walk on sunny ground or shady ground. Write a question, tell how you will make three same-time observations, and tell what you will explain if one place has more ants in your counts. Then carry out the approved investigation in a small team. Teacher first selects two safe, equal-size ground patches, one sunny and one shaded, that children can observe from marked standing places without touching insects or nests. Explore both visually for two minutes and share what you notice. Agree on your question and assign observers to both patches plus a recorder/timekeeper; everyone contributes and swap roles after the first check. At the agreed start time, five minutes later and ten minutes later, observe both patches simultaneously for one minute. Count ants inside each patch at the END of that minute (not every crossing, which could count one ant repeatedly). On extra paper record date/time, Sunny count and Shady count in three rows. Compare the actual counts and explain what they show, including ties or zero ants. Keep the original plan separate. Stay with the teacher, do not handle or feed insects, and stop if the location is unsafe.

PART 1 • READ AND MARK

Underline the question the team investigated. Circle the sentence that tells how they checked the tray at regular times, and put a box around the sentence that gives their explanation. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What question did Maya's team investigate?	The team investigated whether pill bugs choose damp places or dry places.
2	How did the team make systematic observations?	They watched for five minutes and counted the pill bugs on each towel every minute.
3	What observation helped the team explain that pill bugs may choose damp places?	Most of their counts showed more pill bugs on the damp towel.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Our question is, "Do more ants walk on sunny ground or shady ground?" At 10:00, 10:05, and 10:10, we will count ants for one minute in equal-size sunny and shady spots. If sunny counts are higher, we will explain that more ants walked on sunny ground during our checks.

Accept equivalent wording for the passage answers. For Your Turn, accept a safe, testable question, three planned observations made at the same times using a fair comparison, and an explanation that matches the stated possible results. Teacher supplies equal-size marked observation patches, clock, extra paper and supervised roles; prechecks safe access and insect hazards and reads the counting rule. No unsafe outdoor visit is required: if suitable patches cannot be arranged, postpone this actual task rather than replacing observations with invented counts. Require team contributions, initial visual exploration, three simultaneous END-of-minute snapshots and an explanation supported by those counts. Original sample plans one-minute counting; the executed snapshot rule clarifies which ants are counted. Accept all zeros, ties, mixed patterns and uncertain conclusions. These counts describe the selected places/times, not proof that sunlight alone causes ant choice or a count of distinct ants across all checks.