

Heat Evidence Trail

Trace how a field report builds its claim from evidence.

12.RI.2.A "Analyze text structures to discern how they affect the meaning and message of informational and technical writing and how their text structures differ from those in narrative texts."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Number sentences that set up the issue with 1, describe how evidence was gathered with 2, and report findings or limits with 3. Draw arrows to show how the numbered parts lead to the passage's final recommendation.

Measuring Heat Near a Bus Stop

- ① On cloudless summer afternoons, dark pavement can become far hotter than the air above it. To examine where that heat accumulates, a municipal research team studied six blocks around a public library in a dense neighborhood. The area included asphalt parking spaces, concrete sidewalks, young street trees, and two bus shelters. Residents had reported uncomfortable waits at the stops, but the team did not assume that pavement alone caused the problem. Shade, building height, traffic, and wind can also change conditions from one location to another.
- ② During four July afternoons, technicians recorded surface temperatures with an infrared thermometer using material-appropriate emissivity settings at 3 p.m., when the day's heat was near its peak. At each block, they took five readings from asphalt, five from sidewalk concrete, and five from shaded ground. A handheld weather meter logged air temperature and wind speed, while photographs documented cloud cover and shade. The team repeated the route on the same days rather than comparing readings from different weeks. This approach could reveal patterns within the study area, although it could not show whether the same pattern would occur in every neighborhood or season.
- ③ Asphalt consistently registered the highest surface temperatures, especially in unshaded parking spaces. Shaded ground was cooler, and concrete readings usually fell between those two surfaces. The bus shelters, however, did not always feel cooler: one shelter faced west and received late-afternoon sun, while the other stood beside a mature tree. The measurements support adding shade where people wait, but they do not prove that a single pavement change will solve heat exposure. Before spending public funds, planners would need measurements from more days, neighborhoods, and weather conditions.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 How does the passage organize information across its three paragraphs? Explain how that order shapes the reader's understanding of the recommendation.

2 Why does paragraph 2 include both detailed procedures and a statement about what the study cannot show? How do these choices affect the report's meaning?

3 How does the contrast between the two bus shelters affect the passage's message about shade and heat?

4 Identify one way this technical report differs from a narrative account of the team's afternoons. What is the effect of that difference?

3 YOUR TURN _____ Your own words

Write a 90 to 120 word response about an observation or small investigation you could realistically conduct. Use three short paragraphs to present a question or issue, methods or evidence, and a finding with a limit, then follow it with one sentence explaining how this order differs from a chronological narrative.

PART 1 • READ AND MARK

Number sentences that set up the issue with 1, describe how evidence was gathered with 2, and report findings or limits with 3. Draw arrows to show how the numbered parts lead to the passage's final recommendation. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How does the passage organize information across its three paragraphs? Explain how that order shapes the reader's understanding of the recommendation.	It moves from the setting and possible causes, to the study procedures and limits, to findings and a qualified recommendation. This order makes the recommendation seem evidence-based and cautious.
2	Why does paragraph 2 include both detailed procedures and a statement about what the study cannot show? How do these choices affect the report's meaning?	The procedures let readers judge how the evidence was gathered, and the limit prevents readers from overgeneralizing. Together, they present the findings as useful but not conclusive.
3	How does the contrast between the two bus shelters affect the passage's message about shade and heat?	The contrast shows that local conditions, such as western sun exposure and nearby trees, can change heat conditions. Shade must be considered with other site-specific factors.
4	Identify one way this technical report differs from a narrative account of the team's afternoons. What is the effect of that difference?	A narrative would likely follow events in time order through a person's experience. This report groups setting, methods, findings, and limits so readers can evaluate the evidence rather than mainly experience the events.

PART 3 • YOUR TURN (SAMPLE ANSWER)

To reduce lunch waste, a student council examined unopened milk cartons left after one lunch period. The question was whether placement of recycling bins affected how many cartons were discarded. Volunteers counted cartons at two exits and noted whether a bin stood within ten feet. They observed only one day, so the count could not represent every menu or grade level. The exit with a nearby bin had fewer cartons in trash cans. The council could test clearer bin signs before recommending a schoolwide change. This order moves from question to evidence to a limited conclusion, unlike a narrative that would mainly recount events in time order.

Accept equivalent descriptions of the passage's movement from context to methods to findings and limitations, as long as students explain its effect on the message. In Part 3, accept varied topics if the response uses the required evidence-based structure, includes a realistic limitation, and accurately contrasts that structure with narrative chronology.