

Evidence With Care

Analyze how a scientific report uses formal, objective language.

CCSS.ELA-Literacy.WHST.9-10.1d “Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline two sentences that limit a claim or identify what the investigation cannot show. Circle three words or phrases that make the writer's conclusions cautious and evidence-based.

Surface Temperature Investigation

- ① On April 18, the environmental science class measured surface temperatures at six locations on the school grounds. At 1:30 p.m., asphalt in the south parking area averaged 41.2 degrees Celsius, while grass beneath mature maples averaged 27.6 degrees Celsius. Students used the same infrared thermometer at each site and recorded three readings per location. Because cloud cover was limited during the sampling period, sunlight likely influenced the difference. However, the investigation measured conditions on one afternoon only, so it cannot determine temperatures during other seasons or weather patterns.
- ② These results are relevant to the proposed shade-tree project near the student entrance. The data indicate that tree cover may reduce pavement temperatures under similar sunny conditions. Cooler pavement could limit heat exposure for people walking between buses and the building, although the study did not measure human body temperature or health outcomes. Before selecting tree species, planners should examine soil depth, underground utilities, maintenance costs, and projected canopy size. A recommendation based on these factors would be more defensible than a claim that any tree planting will solve the heat problem.
- ③ To improve the investigation, the class could collect temperature readings on several days in each season and at multiple times of day. It could also compare shaded and unshaded surfaces made of the same material. Reporting the range and average of repeated measurements would show how consistent the pattern is. These additions would not prove that trees prevent heat-related illness, but they would provide stronger evidence about local surface temperatures. The report should distinguish measured results from predictions about the proposed project near the entrance.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 Copy one sentence that states a limitation of the investigation. How does this sentence help the report maintain an objective tone?

2 Which two words in paragraph 2 make the possible benefits of tree cover sound cautious rather than certain?

3 What four factors should planners examine before selecting tree species? Why does including these factors make a recommendation more formal and defensible?

4 Name two details that show the writer is following scientific reporting conventions. Explain how each detail strengthens the report.

3 YOUR TURN _____ Your own words

Write a 55 to 70 word paragraph for a school facilities report. Use this data to make a cautious recommendation about a quiet study area: library hallway, 58 decibels; courtyard, 67 decibels; three readings at each site during lunch. Include one limitation, use formal objective language, and distinguish measured evidence from a prediction.

PART 1 • READ AND MARK

Underline two sentences that limit a claim or identify what the investigation cannot show. Circle three words or phrases that make the writer's conclusions cautious and evidence-based. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Copy one sentence that states a limitation of the investigation. How does this sentence help the report maintain an objective tone?	"However, the investigation measured conditions on one afternoon only, so it cannot determine temperatures during other seasons or weather patterns." It prevents the writer from claiming more than the data can support.
2	Which two words in paragraph 2 make the possible benefits of tree cover sound cautious rather than certain?	"may" and "could"
3	What four factors should planners examine before selecting tree species? Why does including these factors make a recommendation more formal and defensible?	Soil depth, underground utilities, maintenance costs, and projected canopy size. These relevant factors support a reasoned recommendation instead of an unsupported claim.
4	Name two details that show the writer is following scientific reporting conventions. Explain how each detail strengthens the report.	Accept any two: giving a date and time, reporting temperatures in degrees Celsius, naming the infrared thermometer, using the same tool at each site, recording three readings per location, or reporting averages. These details make the methods and evidence specific and checkable.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Across three readings at each site during lunch, the library hallway averaged 58 decibels, whereas the courtyard averaged 67 decibels. The lower measurement indicates that the hallway could be considered for a quiet study area. Because observations occurred during one lunch period, they do not establish noise levels throughout the day. If this pattern continues, the hallway may provide a more suitable setting for independent work.

Accept reasonable annotations of limitations and cautious language, including "likely," "may," "could," "would," "cannot," and "would not prove." For the writing task, accept responses that use the supplied data accurately, maintain a formal tone, state a limitation, and make a cautious evidence-based recommendation.