Cooler Stops Inquiry

Revise a focused question and weigh evidence before making a claim.

11.R "The student will conduct research and read a series of conceptually related texts on selected topics to build knowledge on grade-eleven content, texts, and areas prompted by student interest..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the revised research question, circle each source, and number the details that show a source's usefulness, limitation, or conflicting evidence.

Investigating Heat at Bus Stops

1. At first, Maya asked, "Do street trees make Riverton cooler?" Her question was too broad because it did not name a place, time, measure, or population. After visiting several stops, she revised it: "How do shaded and unshaded bus stops affect afternoon air temperatures and heat exposure for bus riders on Riverton's Route 8 during July?" This narrower question identifies the population, bus riders, and allows Maya to compare matched stops at the same time of day while recognizing that pavement, traffic, and building shade can also influence conditions.

2. Maya gathers three kinds of evidence. She records air temperature and shade at six stops at 3:00 p.m. on ten clear days, making her notes a primary source. She also uses a transit agency report to identify heavily used stops and a peer-reviewed urban forestry study to understand how canopy cover can influence heat. Before using each source, she checks the author, date, method, and purpose. The transit report is useful for stop use, but its ridership counts do not measure heat exposure or shade conditions.

3. Her measurements show that shaded stops were usually cooler, but one unshaded stop was cooler than a shaded stop beside a dark brick wall. Rather than ignore this conflict, Maya notes that nearby surfaces may affect readings and plans another set of measurements. Her claim will state that shade at Route 8 stops is associated with lower afternoon air temperatures in her sample, not that trees alone cause every difference. She will cite her notes and each outside source in MLA style. If AI helps her find search terms, she must verify its suggestions, credit borrowed ideas, and never present generated wording as her own.

2 ANSWER WITH EVIDENCE

Use the passage

1. What population is named in Maya's revised question, and what route and month narrow the inquiry?

2. Which source helps Maya identify heavily used stops, and what important limitation does that source have?

3. What conflicting observation does Maya find, and how does she respond to it in her research plan?

4. What must Maya do before using AI suggestions, and what must she not do with AI-generated wording?

3 YOUR TURN

Your own words

Choose a local heat-related topic. Write a revised research question that names a population, place, time, and measurable comparison, then list one primary source and one secondary source, explain one source limitation, and write a tentative claim with a counterclaim using an MLA-style in-text citation for the secondary source.

ANSWER KEY

Cooler Stops Inquiry

GRADE 11 · 11.R

PART 1 · READ AND MARK

Underline the revised research question, circle each source, and number the details that show a source's usefulness, limitation, or conflicting evidence. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What population is named in Maya's revised question, and what route and month narrow the inquiry?	**The population is bus riders. The inquiry focuses on Riverton's Route 8 during July.**
2	Which source helps Maya identify heavily used stops, and what important limitation does that source have?	**The transit agency report helps identify heavily used stops. Its ridership counts do not measure heat exposure or shade conditions.**
3	What conflicting observation does Maya find, and how does she respond to it in her research plan?	**One unshaded stop was cooler than a shaded stop beside a dark brick wall. Maya considers nearby surfaces as a possible influence and plans another set of measurements.**
4	What must Maya do before using AI suggestions, and what must she not do with AI-generated wording?	**She must verify AI suggestions and credit borrowed ideas. She must not present generated wording as her own.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

How do surface temperatures differ between shaded and unshaded lunch areas used by students at Lincoln High School in Sacramento, California, during the 12:30 p.m. lunch period in September? I will collect surface-temperature readings at six areas as my primary source and use the U.S. Environmental Protection Agency webpage "Using Trees and Vegetation to Reduce Heat Islands" as a secondary source; the webpage explains broad patterns but does not measure Lincoln High School. My tentative claim is that shaded lunch areas will have lower surface temperatures, although pavement material or building shadows may explain some differences (U.S. Environmental Protection Agency).

Accept equivalent descriptions of the named population, source limitations, conflicting evidence, and ethical AI use when they are supported by the passage. For the open task, accept varied local topics if the question is focused and the response includes all requested research components.