Evidence Under Shade

Evaluate sources before making a local research claim.

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

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the details that narrow Leah's revised research question, circle one limitation for each source, and number the steps she will take to use evidence ethically.

Researching Heat at Bus Stops

1. Leah begins with the question, "Do shade trees reduce dangerous heat at bus stops in Riverton?" A city transportation report lists 40 stops scheduled for shade structures, but it does not measure temperature. To narrow her inquiry, Leah revises the question: "During July afternoons, how does air temperature differ between Riverton bus stops with tree shade and stops without shade?" The revision identifies a place, season, time, and comparison. It also leads her to seek temperature measurements, rather than opinions about whether riders prefer shade.

2. Leah finds three useful sources. First, a city environmental office dataset records hourly air temperatures, dates, and locations from calibrated sensors. Because the office collected the measurements, it is a primary source, though Leah checks whether sensors were placed at the same height. Second, a 2024 peer-reviewed literature review summarizes studies of shade and urban heat. It is a secondary source with a broad evidence base, but it cannot prove what happens at Riverton stops. Third, a local riders' survey reports that most respondents feel cooler under trees. Its perspective is valuable, yet feelings are not temperature measurements, and voluntary responses may not represent all riders.

3. To make a claim, Leah plans to compare matched shaded and unshaded stops during the same afternoon hours, then explain what the dataset shows. She will acknowledge a counterclaim: differences could reflect nearby pavement, traffic, or building shade instead of trees alone. In her report, Leah will quote exact wording sparingly, use quotation marks, and cite both quotations and paraphrases in MLA style. Copying a source's words or ideas without credit is plagiarism, which misleads readers and violates academic ethics. If she uses an AI tool to brainstorm search terms or summarize, she will verify every statement in original sources, follow her teacher's rules, and disclose the tool's use.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which four details make Leah's revised question more focused than her first question?

2. Why is the city environmental office dataset a primary source, and what possible measurement issue does Leah plan to check?

3. Why is the peer-reviewed literature review useful, and why is it limited for Leah's specific claim about Riverton?

4. State one alternative explanation Leah plans to acknowledge for a temperature difference between shaded and unshaded stops.

3 YOUR TURN

Your own words

Choose a local or school-related topic. Write a 90-120 word research plan that begins with a narrowed research question, names two sources you would use, labels each source as primary or secondary, and gives one limitation for each. Include a tentative claim, one counterclaim, and one step you will take to cite sources or check AI use ethically.

ANSWER KEY

Evidence Under Shade

GRADE 12 · 12.R

PART 1 · READ AND MARK

Underline the details that narrow Leah's revised research question, circle one limitation for each source, and number the steps she will take to use evidence ethically. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which four details make Leah's revised question more focused than her first question?	**It identifies Riverton, July, afternoons, and a comparison between bus stops with tree shade and stops without shade.**
2	Why is the city environmental office dataset a primary source, and what possible measurement issue does Leah plan to check?	**It is primary because the office collected the temperature measurements. Leah will check whether the sensors were placed at the same height.**
3	Why is the peer-reviewed literature review useful, and why is it limited for Leah's specific claim about Riverton?	**It provides a broad evidence base from many studies of shade and urban heat. It cannot prove what happens at Riverton bus stops.**
4	State one alternative explanation Leah plans to acknowledge for a temperature difference between shaded and unshaded stops.	**Nearby pavement, traffic, or building shade could cause the difference instead of trees alone.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Revised question: During the first semester, do later school start times change first-period attendance at Lakeside High? I would use the district's anonymized attendance records, a primary source collected by the district, but absences can have causes unrelated to sleep. I would also use a peer-reviewed literature review on adolescent sleep and school schedules, a secondary source, but its findings may not match Lakeside. My tentative claim is that a later start could improve attendance. A counterclaim is that bus schedules or seasonal illness could affect attendance. I will paraphrase carefully, cite both sources in MLA, and verify any AI-generated search terms against the sources.

Accept equivalent focused details, source evaluations, and alternative explanations supported by the passage. For the open response, accept varied topics and claims if the plan includes all requested elements and treats source limits, citation, and AI use responsibly.