

Evidence Under Heat

Evaluate sources before building a research claim.

12.R.1 "Evaluation and Synthesis of Information Formulate and revise questions about a research topic broadening or narrowing the inquiry as necessary. Gather and organize information from various sources..."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each claim about evidence or source use. Circle details that qualify, limit, or challenge a claim, then number the three evidence sources discussed.

Investigating Hot Bus Stops

- ① A student team begins with the broad question, "How can our city reduce dangerous summer heat?" The question is too large for a short investigation, so the team revises it: "How do afternoon air temperatures differ between shaded and unshaded bus stops in Riverton during July?" The revised question identifies a place, time, and comparison. To investigate, students collect temperature readings at six stops using the same calibrated thermometer and record cloud cover and time. Their logs are primary evidence because the team created them. A city planning report mapping tree canopy is a secondary source that summarizes earlier measurements and may help explain patterns.
- ② Source quality depends on more than whether a source agrees with a preferred conclusion. The planning report names its data years and methods, but its tree-canopy map was last updated in 2018. It may not show trees removed since then. A neighborhood association post claims that every shaded stop is cooler, yet it provides no measurements and was written to persuade the council to fund trees. The students' logs show five shaded stops were cooler on most observation days, while one shaded stop near a brick wall was not. This conflicting result limits a simple claim and suggests that nearby surfaces also affect heat.
- ③ To make a defensible claim, the team can combine its logs with the report while stating what each source cannot establish. The logs describe six stops during selected July afternoons, not every location or season. The report offers broader canopy context, but its older map reduces usefulness for current street-level decisions. If students use an AI tool to locate sources or summarize an article, they must check the original source, verify quotations and data, and follow school disclosure rules. Presenting another source's words or ideas as their own is plagiarism. Unacknowledged AI assistance may violate a policy, but it is not automatically plagiarism. Quoted and paraphrased material needs MLA citations.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 How did the team narrow its original research question? Name two features of the revised question that make it more focused.

2 Evaluate the city planning report. What makes it useful, and what limitation reduces its usefulness for a current decision?

3 How do the students' logs challenge the neighborhood association post's claim, and what possible explanation does the passage provide?

4 According to the passage, what is plagiarism, and why can unacknowledged AI use still be a problem even when it is not plagiarism?

3 YOUR TURN _____ Your own words

Choose a school or community issue different from bus-stop heat. In 4 sentences, write a narrowed research question, name one primary and one secondary source with one limitation each, state a tentative claim and counterclaim, and explain how you would use AI ethically and cite borrowed ideas in MLA style.

PART 1 • READ AND MARK

Underline each claim about evidence or source use. Circle details that qualify, limit, or challenge a claim, then number the three evidence sources discussed. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How did the team narrow its original research question? Name two features of the revised question that make it more focused.	The team changed a citywide question about reducing heat into a question about temperature differences at shaded and unshaded Riverton bus stops during July. It identifies a specific place, time, and comparison.
2	Evaluate the city planning report. What makes it useful, and what limitation reduces its usefulness for a current decision?	It is useful because it names its data years and methods and provides broader tree-canopy context. Its map was last updated in 2018, so it may not show trees removed since then.
3	How do the students' logs challenge the neighborhood association post's claim, and what possible explanation does the passage provide?	The post claims every shaded stop is cooler, but one shaded stop near a brick wall was not cooler. The passage suggests nearby surfaces can also affect heat.
4	According to the passage, what is plagiarism, and why can unacknowledged AI use still be a problem even when it is not plagiarism?	Plagiarism is presenting another source's words or ideas as one's own. Unacknowledged AI use may still violate a school or other policy, even if it is not plagiarism.

PART 3 • YOUR TURN (SAMPLE ANSWER)

My narrowed question is, "How would moving Central High School's start time from 7:30 to 8:15 affect seniors' sleep during one semester?" Anonymous student sleep diaries are primary evidence, but voluntary entries may not represent all seniors; an American Academy of Pediatrics policy statement is a secondary source, but it does not predict results at this school (Adolescent Sleep Working Group 642). My tentative claim is that later starts would increase reported sleep, while a counterclaim is that transportation schedules could make the change impractical. I would use AI only to generate search terms, check its suggestions against original sources, disclose required use, and list the policy statement in Works Cited: Adolescent Sleep Working Group. "School Start Times for Adolescents." Pediatrics, vol. 134, no. 3, 2014, pp. 642-649.

Accept equivalent explanations that accurately identify source strengths, limitations, conflicting evidence, and ethical AI use. For Part 3, require all four requested sentences, a genuinely narrowed question, a plausible limitation for each source, a counterclaim, and an MLA-style in-text citation plus Works Cited information.