

Mapping City Heat

Find the main conclusion, then summarize the evidence and limits.

CCSS.ELA-Literacy.RST.11-12.2 "Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline one sentence in each paragraph that carries a major idea. Number the three underlined ideas 1, 2, and 3 to show how the text builds its conclusion.

How Cities Map Heat

- ① On July 24, 2023, volunteers working with Asheville GreenWorks measured heat and humidity across the Asheville, North Carolina, area. NOAA's August 2 report describes three shifts and routes chosen to sample different amounts of vegetation, pavement, and development. Clear weather mattered: wildfire smoke had reduced sunlight on some earlier days. Researchers planned to analyze the observations and produce maps to guide tree planting and protection. The article documented fieldwork and intended uses; it did not yet report completed maps or demonstrate that any planting project had lowered temperatures.
- ② Turning observations into a useful heat assessment requires decisions about what the measurements represent. EPA guidance distinguishes the air around people from surfaces such as roofs: the two temperatures are not interchangeable. Sensors carried along fixed routes can measure air, but their paths may leave other areas unsampled. A model can estimate conditions between observations; an estimate is not an additional direct measurement. Investigators therefore need representative sites, consistent sensor placement, and records of when and where readings were taken. A technically accurate measurement can still support a misleading conclusion if its limited coverage is treated as a complete picture.

- ③ A heat assessment can inform action without deciding every policy question. EPA describes responses ranging from additional vegetation to changes in roofs and pavement. Choosing among them requires connecting a diagnosed problem to a suitable intervention. Suppose a council uses one hot-day survey to select tree-planting locations. That is a proposed application of evidence, not proof that those trees will solve every local heat problem. Officials would need later observations to evaluate the outcome. The central conclusion is that useful heat mapping joins careful measurement with explicit limits and a way to assess action; a persuasive image alone cannot establish success.

2 ANSWER WITH EVIDENCE _____ Use the passage

- ① State paragraph 1's central idea in one sentence, distinguishing work already completed from a planned use.

- ② In simpler words, explain why paragraph 2 distinguishes a model estimate from a direct measurement.

- ③ Summarize paragraph 2's warning about coverage. Include why an accurate reading can still lead to a misleading conclusion.

- 4** How does paragraph 3 build the text's overall conclusion? Explain the difference between selecting an intervention and evaluating its outcome.

3 YOUR TURN _____ Your own words

Write a 60 to 75 word summary for a city council newsletter. State the text's central conclusion, simplify the process of turning observations into an assessment, and include one limitation and one possible city response. Distinguish collected evidence from a planned action or an outcome. Use your own words.

PART 1 • READ AND MARK

Underline one sentence in each paragraph that carries a major idea. Number the three underlined ideas 1, 2, and 3 to show how the text builds its conclusion. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	State paragraph 1's central idea in one sentence, distinguishing work already completed from a planned use.	Asheville volunteers collected heat and humidity observations for future mapping and tree planning; the August report did not establish that those later actions had succeeded.
2	In simpler words, explain why paragraph 2 distinguishes a model estimate from a direct measurement.	A sensor records conditions where it is used, while a model calculates likely conditions elsewhere. Calculating a value does not mean someone measured that location.
3	Summarize paragraph 2's warning about coverage. Include why an accurate reading can still lead to a misleading conclusion.	A reading may be correct for its place and time, but limited routes do not represent every location or condition. Treating that small sample as a complete picture can mislead.
4	How does paragraph 3 build the text's overall conclusion? Explain the difference between selecting an intervention and evaluating its outcome.	It extends the concern about evidence to decisions: a map can help choose an action, but later observations are needed to evaluate what happened. Choosing tree planting does not itself prove reduced heat.

PART 3 · YOUR TURN (SAMPLE ANSWER)

Heat mapping can guide city decisions when officials explain what their evidence can establish. Asheville volunteers gathered observations for later maps and tree planning. More generally, sensors record conditions at sampled locations, while models estimate elsewhere. Limited coverage cannot describe every condition. A council could use an assessment to choose planting sites, then collect later evidence to evaluate results instead of treating its plan as proof of success.

This is a classroom synthesis, not a verbatim excerpt. Paragraph 1 draws on NOAA NCEI, 'NCEI Supports Heat Mapping Study in Asheville,' August 2, 2023: www.ncei.noaa.gov/news/ncei-supports-heat-mapping-study-asheville. Paragraph 2 draws on EPA, 'Measuring Heat Islands,' updated March 10, 2026: www.epa.gov/heatislands/measuring-heat-islands. The response options in paragraph 3 draw on EPA, 'Heat Island Reduction Solutions,' updated December 3, 2025: www.epa.gov/heatislands/heat-island-reduction-solutions. The council example and concluding reasoning are an explicitly hypothetical application, not reported Asheville findings. Accept accurate simpler wording and varied summaries within 60-75 words. Do not equate an estimate with an observation or a proposed action with demonstrated success. Students need only the supplied text; no external map or device is required.