Heat Map Thinking

Use concise labels, connections, and evidence to track a text.

11.P.EICC.3.d "Summarize and visualize sections of the text to maintain understanding. (I)"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the sentence that best states each paragraph's central idea, circle two supporting details in each paragraph, and write a three-to-five-word margin label for each paragraph to create a quick visual map.

Cooling the City

1. On a hot summer afternoon, a city can remain far warmer than nearby farmland. Dark roofs, asphalt streets, and brick walls absorb solar energy during the day, then release heat slowly after sunset. This urban heat island effect can raise nighttime temperatures, when people have fewer chances to recover from heat. Buildings also change airflow, while cars and air conditioners add waste heat. Heat is not spread evenly across a city. Neighborhoods with fewer trees and more pavement often have hotter sidewalks and less shade, making a routine walk, bus wait, or apartment without cooling more difficult.

2. Cities can lower local temperatures by changing surfaces and adding living cover. A mature tree shades pavement and cools the air as water evaporates from its leaves. Parks, street trees, green roofs, and lighter-colored roofs can therefore reduce heat near where people live and travel. These measures do more than alter a thermometer reading. Shade can make walking safer during heat waves, and planted areas can absorb some stormwater instead of sending it immediately into drains. Because space, money, and maintenance differ from block to block, planners often use temperature maps and tree-canopy data to identify places where investments could protect the most exposed residents.

3. Cooling strategies have limits, so a useful plan considers trade-offs over time. Young trees do not provide the shade of mature ones, and they need watering and care while they establish roots. Reflective roofs can lower a building's heat absorption, yet a project may not help pedestrians on an unshaded street. Researchers and city officials combine measurements, maps, and residents' reports to judge whether a project is working. They may compare temperatures before and after changes, but they also examine access: Who receives shade, who pays energy costs, and who can use cooler public spaces? A complete picture connects physical data with daily experience.

2 ANSWER WITH EVIDENCE

Use the passage

1. Write a four-to-seven-word title that summarizes the entire passage.

2. Turn paragraph 1 into a cause-and-effect chain using arrows. Include the source of heat, what happens after sunset, and the result for residents.

3. Turn paragraph 2 into a three-box flow using arrows. Show how planners use information to decide where cooling efforts are needed.

4. Summarize paragraph 3 in 18 to 25 words. Include one limitation or trade-off and one way officials judge whether a project works.

3 YOUR TURN

Your own words

Create a three-panel visual summary of the passage. Give each panel a title of six words or fewer, include one evidence detail from that section, and connect the panels with arrows. Then write a 35-to-45-word explanation of how your visual shows the passage's overall message.

ANSWER KEY

Heat Map Thinking

GRADE 11 · 11.P.EICC.3.d

PART 1 · READ AND MARK

Underline the sentence that best states each paragraph's central idea, circle two supporting details in each paragraph, and write a three-to-five-word margin label for each paragraph to create a quick visual map. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Write a four-to-seven-word title that summarizes the entire passage.	**City Heat, Cooling, and Fair Access**
2	Turn paragraph 1 into a cause-and-effect chain using arrows. Include the source of heat, what happens after sunset, and the result for residents.	**Dark roofs, asphalt, and brick absorb solar energy → they release heat after sunset → city nights stay warmer, especially in areas with little shade.**
3	Turn paragraph 2 into a three-box flow using arrows. Show how planners use information to decide where cooling efforts are needed.	**Temperature maps and tree-canopy data → identify places with the most exposed residents → target cooling investments there.**
4	Summarize paragraph 3 in 18 to 25 words. Include one limitation or trade-off and one way officials judge whether a project works.	**Because cooling projects have limits, officials should track temperature changes and access to judge whether benefits reach people fairly.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Panel 1, Pavement Stores Heat: Dark surfaces release heat after sunset. Panel 2, Trees and Roofs Cool: Shade, evaporation, and lighter roofs reduce local heat. Panel 3, Test Benefits Fairly: Compare temperatures and access. Connection: Heat problem → targeted cooling → equitable evaluation. Explanation: The visual moves from the unequal heat burden to practical responses and then to evaluation. It shows that a cooler temperature alone is not enough, because planners must also consider who can reach shade and cooler public spaces.

Accept equivalent concise labels, chains, and visual layouts that accurately represent the three paragraph-level ideas. For the final visual, look for a clear progression from the heat problem to cooling approaches to evaluation of fair access.