

Heat Plan Puzzle

Compare evidence and build a defensible city response.

12.C.3.C "Synthesize multiple streams of information on the same or similar topic to create a summary or formulate a position."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline one main claim from each source or group of sources, then number details that show agreement, a different benefit, or a tradeoff. Use your marks to see how the information fits together.

Cooling a Hot City

- ① During a July heat wave, the City of Mesa Verde examined why some blocks stayed far hotter than others after sunset. Its public health department mapped ambulance calls for heat illness and found that calls clustered in neighborhoods with little tree cover and many dark roofs. The department warned that night heat can be especially dangerous because bodies have less time to recover. It proposed opening cooling centers, extending evening bus service, and checking on residents who are older, isolated, or without air conditioning. These steps respond quickly to risk, but they do not lower the temperature of streets or buildings.
- ② A university research team used satellite images and temperature sensors to compare 40 city blocks over three summers. Blocks with more pavement and fewer trees were warmer in the afternoon, confirming the health department's pattern. However, researchers found that roof color mattered most for the temperature inside top-floor apartments, while tree shade mattered more for sidewalk temperatures. They estimated that planting trees can cool shaded surfaces, although young trees need years to provide broad shade and require water during dry periods. The team recommended pairing tree planting with lighter-colored roofs rather than treating either measure as a complete solution.
- ③ Residents added another perspective in a survey and at two neighborhood meetings. Many supported more trees, but renters worried that construction for tree pits or roof work could raise rents or disrupt access to homes. Small-business owners favored shade on commercial sidewalks, saying customers avoid blocks that feel dangerously hot. The city's budget office reported that cooling centers and bus service can be expanded before next summer, whereas large roof and tree programs require multi-year funding and maintenance plans. Across the reports, the evidence points to immediate protection plus long-term changes. The disagreement is not whether heat is harmful, but which benefits and burdens city leaders should weigh first.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What shared pattern do the public health department and university researchers identify? Use evidence from both sources in your answer.

2 How do the sources distinguish between actions that can protect people soon and actions that can reduce heat over time?

3 Why does the passage suggest that tree planting alone is not a complete solution? Synthesize the research and resident information.

4 Which policy sequence is best supported by the combined information, and why?

3 YOUR TURN _____ Your own words

Write a three-sentence recommendation to Mesa Verde's city leaders. Use information from at least two sources, propose an immediate and a long-term action, and address one possible burden or tradeoff.

PART 1 • READ AND MARK

Underline one main claim from each source or group of sources, then number details that show agreement, a different benefit, or a tradeoff. Use your marks to see how the information fits together. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What shared pattern do the public health department and university researchers identify? Use evidence from both sources in your answer.	Both identify hotter conditions in areas with little tree cover. The health department links heat-illness calls to neighborhoods with few trees and dark roofs, while researchers found warmer blocks had more pavement and fewer trees.
2	How do the sources distinguish between actions that can protect people soon and actions that can reduce heat over time?	Cooling centers and evening bus service can be expanded before next summer and protect people quickly. Tree planting and lighter roofs can reduce heat but require years, funding, maintenance, or construction.
3	Why does the passage suggest that tree planting alone is not a complete solution? Synthesize the research and resident information.	Young trees take years to provide broad shade and need water during dry periods. Residents also worry that tree-pit construction could disrupt home access or raise rents, so other measures and community concerns must be considered.
4	Which policy sequence is best supported by the combined information, and why?	The city should expand cooling centers and evening bus service first, then invest in trees and lighter-colored roofs. This sequence provides immediate protection while building long-term cooling measures that address different spaces.

PART 3 • YOUR TURN (SAMPLE ANSWER)

City leaders should expand cooling centers and evening bus service before next summer while funding a long-term program for trees and lighter roofs. Health and budget information show that immediate protections are needed soon, while research shows that no single design change cools every place. To limit disruption, the city should consult renters and businesses before selecting projects.

Accept recommendations that accurately combine at least two passage sources, include both a near-term and long-term action, and address a stated tradeoff or burden. Responses may recommend different priorities if their reasoning is supported by the passage.