Shade Plan Evidence

Analyze how research and local knowledge shape a city decision.

7.T.RA.1.c "Draw from accumulated knowledge and research to analyze texts, supporting, challenging, or extending ideas and information. (C)"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each piece of research or local knowledge in the passage. In the margin, label each underlined idea S if it supports, C if it challenges, or E if it extends another idea.

Where Should Cities Plant Trees?

1 In many cities, summer heat is stronger in neighborhoods with few trees. Pavement and dark roofs absorb sunlight, then release heat slowly after sunset. Researchers call this the urban heat island effect. A 2023 study of several U.S. cities found that tree shade can lower surface temperatures on sidewalks and streets. This finding supports what many residents already notice: walking along a shaded block can feel cooler than walking beside an uncovered parking lot. However, shade does not cool every place equally. Tree species, water supply, and nearby buildings matter.

2 City leaders sometimes respond by planting trees wherever open ground is available. That plan may extend the study's idea too far. Young trees provide limited shade, and their benefits take years to grow. Also, trees need regular watering, especially during dry periods. A report from the U.S. Forest Service explains that healthy urban trees can reduce heat and improve air quality, but poor planting choices can damage sidewalks or fail in harsh conditions. Therefore, a tree program needs more than a total number of seedlings. It needs plans for species, care, and locations.

3 Before choosing sites, planners could combine research with local knowledge. Bus stops, playgrounds, and apartment blocks may be places where people wait outside during the hottest hours. Temperature measurements could test whether those places are hotter than nearby shaded areas. Planners should also ask residents which routes they use and where older adults or young children lack shade. This evidence would extend the original study because it connects citywide findings to needs. It could challenge a plan that favors empty lots over busy walking routes. Research gives a starting point, while local evidence helps decide priorities.

2 ANSWER WITH EVIDENCE

Use the passage

1. How does the 2023 study support the idea that trees can make city spaces cooler? Use one detail from the passage.

2. Which idea challenges planting trees wherever there is open ground? Explain why it challenges that plan.

3. How does the U.S. Forest Service report add to the information from the 2023 study?

4. What local evidence could planners use to challenge a plan that favors empty lots over busy walking routes? Explain how that evidence would help.

3 YOUR TURN

Your own words

Choose one outdoor place at your school or in your community that could use more shade. In 3 sentences, propose a tree-planting priority, use one detail from the passage and one observation or piece of prior knowledge, and explain how your evidence supports, challenges, or extends an idea from the passage.

ANSWER KEY

Shade Plan Evidence

GRADE 7 · 7.T.RA.1.c

PART 1 · READ AND MARK

Underline each piece of research or local knowledge in the passage. In the margin, label each underlined idea S if it supports, C if it challenges, or E if it extends another idea. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How does the 2023 study support the idea that trees can make city spaces cooler? Use one detail from the passage.	**The study found that tree shade can lower surface temperatures on sidewalks and streets, supporting the idea that shaded places can feel cooler.**
2	Which idea challenges planting trees wherever there is open ground? Explain why it challenges that plan.	**Young trees provide little shade at first, and trees need water and suitable conditions. This challenges the plan because an open space may not produce useful, healthy trees.**
3	How does the U.S. Forest Service report add to the information from the 2023 study?	**It adds that healthy trees can improve air quality as well as reduce heat, while warning that poor planting choices can damage sidewalks or fail.**
4	What local evidence could planners use to challenge a plan that favors empty lots over busy walking routes? Explain how that evidence would help.	**They could ask residents about routes they use and measure temperatures at bus stops, playgrounds, or apartment blocks. This could show that busy places where people wait in heat need shade more than empty lots.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

The bus stop near our school should be a tree-planting priority. The passage says bus stops may be places where people wait during the hottest hours, and I have seen students stand there after school with no shade. This local observation extends the citywide research by identifying a specific site that planners should measure and consider.

Accept answers that accurately connect a passage detail to a claim by supporting, challenging, or extending it. For Part 3, accept different locations and proposals when the response has three sentences, uses both required kinds of evidence, and clearly explains the connection.