

Shade Evidence File

Annotate evidence across three short sources.

7.5 “Comprehension skills: listening, speaking, reading, writing, and thinking using multiple texts. The student uses metacognitive skills to both develop and deepen comprehension of increasingly complex texts...”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB As you read, underline one detail in each text that explains how trees may change summer heat. Write 1, 2, and 3 beside the details you would combine to make one evidence-based conclusion.

Do Street Trees Change Summer Heat?

- ① Text 1, City Temperature Survey: On a July afternoon, Riverton volunteers measured sidewalk temperatures at twelve blocks. Blocks with mature tree canopies averaged 96°F, while nearby blocks with little shade averaged 112°F. Air temperatures were similar across the neighborhood, so the survey focused on how hot surfaces became. The report cautioned that the measurements showed a pattern, not proof that trees alone caused every difference. Dark pavement, building shade, and the time of day could also affect a reading.
- ② Text 2, Science Explanation: Trees cool places in two main ways. Their leaves block sunlight from reaching pavement and walls. Trees also move water from the soil through their leaves. When that water evaporates, it uses heat energy from the surrounding area. This process, called transpiration, can cool the air near a tree. Cooling is not equal everywhere, however. A young tree with a small canopy provides less shade than a large, healthy tree, and dry soil can limit transpiration.
- ③ Text 3, Resident Interview: Malik, who walks home past Riverton’s library, noticed a change after the city planted trees along his route. “Before, I crossed the street to avoid the sunny side,” he said. “Now I wait near the trees for my bus.” His observation does not measure temperature, but it shows how cooler surfaces and shade may affect daily choices. The city plans to water new trees during dry weeks, a step that may help them survive and continue cooling the area.

2 ANSWER WITH EVIDENCE Use the passage

- 1 Before reading, what purpose would help you use all three texts together? State your purpose in one sentence.

- 2 Use Text 1 and Text 2. What two pieces of evidence support the idea that tree canopy can make streets cooler?

- 3 What can you infer about why the city plans to water new trees? Support your inference with details from Text 2 and Text 3.

- 4 The word transpiration may be new. Which details in Text 2 help you figure it out, and what does the word mean in this text?

3 YOUR TURN Your own words

Imagine the city council is deciding whether to plant trees near a school. Write 3 or 4 sentences that make a recommendation, use one specific detail from each of at least two texts, and ask one question about information the council still needs.

PART 1 • READ AND MARK

As you read, underline one detail in each text that explains how trees may change summer heat. Write 1, 2, and 3 beside the details you would combine to make one evidence-based conclusion. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Before reading, what purpose would help you use all three texts together? State your purpose in one sentence.	To determine how and why street trees may reduce summer heat in Riverton and affect residents.
2	Use Text 1 and Text 2. What two pieces of evidence support the idea that tree canopy can make streets cooler?	Text 1 shows that blocks with mature canopies averaged 96°F, compared with 112°F on blocks with little shade. Text 2 explains that leaves block sunlight from pavement and walls, and transpiration can cool air near a tree.
3	What can you infer about why the city plans to water new trees? Support your inference with details from Text 2 and Text 3.	The city likely wants new trees to survive and keep cooling the area. Text 2 says dry soil can limit transpiration and young trees provide less shade, while Text 3 says the city plans to water trees during dry weeks.
4	The word transpiration may be new. Which details in Text 2 help you figure it out, and what does the word mean in this text?	The text says trees move water from soil through their leaves and that the water evaporates, using heat energy. Transpiration means water moving through and evaporating from a tree's leaves, which can cool nearby air.

PART 3 • YOUR TURN (SAMPLE ANSWER)

The council should plant and care for trees along the school's hottest walkways. In Riverton, blocks with mature canopies had sidewalks averaging 96°F, compared with 112°F on blocks with little shade, and Text 2 explains that leaves block sunlight while transpiration can cool nearby air. How much space and water will the new school trees receive during dry weeks?

Accept equivalent purposes, evidence choices, and inferences when students accurately connect details from the labeled texts. For the open response, accept varied recommendations if the student uses specific evidence from at least two texts and includes a relevant unanswered question.