

Shade Decisions

Use details to evaluate a city tree decision.

8W5 “Draw evidence from literary or informational texts to support analysis, reflection, and research. Apply grade 8 Reading standards to both literary and informational text, where applicable.”

NAME _____ DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline one claim in each paragraph. Circle one detail in the same paragraph that supports or qualifies that claim, then number your three claim-and-detail pairs 1, 2, and 3.

Where Should Cities Plant Trees?

- ① City trees do more than decorate a street. Their leaves block some sunlight before it reaches pavement, benches, and building walls. Because dark pavement absorbs solar energy, a bare sidewalk may become much hotter than nearby grass or shade. In field studies, researchers compare surface temperatures at several spots during the same hour. These comparisons help planners identify blocks where shade could make walking safer and more comfortable during heat waves for people traveling on foot.
- ② Trees can also affect a neighborhood's energy use. Shade on a sunny wall can reduce the heat that enters a building, so its cooling system may run less often. However, location matters. A young tree needs water while its roots become established, and a tree planted too close to a sidewalk can eventually lift pavement. Cities therefore examine soil space, nearby pipes, and long-term care costs before choosing a species and site for each location.
- ③ Some residents worry that tree programs cost money that could pay for other needs. That concern is reasonable, especially when a city must prune branches, replace dead trees, or repair damaged pavement. Yet planners can use evidence to compare costs with benefits. They might record summer surface temperatures, electricity demand in shaded buildings, and residents' reports about walking routes. A careful decision does not assume every tree belongs everywhere. It uses local data to select places where trees solve a defined problem.

2 ANSWER WITH EVIDENCE Use the passage

1 What is the passage's central idea? Use two details from the passage to support your answer.

2 Why does the author explain that researchers compare surface temperatures during the same hour? What does this detail add to the evidence?

3 Identify one challenge of planting city trees. Explain how the author balances that challenge with a benefit of trees.

4 What does the final sentence mean when it says planners select places where trees solve a defined problem? Use one earlier detail to explain.

3 YOUR TURN Your own words

Write an 80- to 110-word recommendation to a city council about planting trees in one type of location, such as a hot bus stop, schoolyard, or shopping street. Make a claim, use two accurate pieces of evidence from the passage, and explain one limitation or planning step.

PART 1 • READ AND MARK

Underline one claim in each paragraph. Circle one detail in the same paragraph that supports or qualifies that claim, then number your three claim-and-detail pairs 1, 2, and 3. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What is the passage's central idea? Use two details from the passage to support your answer.	Cities should use evidence to choose tree locations because trees can provide shade and energy benefits, but they also require suitable space, care, and planning. Supporting details may include cooler shaded pavement, reduced heat entering buildings, water needs, roots lifting pavement, or checks of soil space and pipes.
2	Why does the author explain that researchers compare surface temperatures during the same hour? What does this detail add to the evidence?	Comparing temperatures during the same hour makes the locations easier to compare because conditions such as time and sunlight are more similar. It makes the evidence about shade more reliable.
3	Identify one challenge of planting city trees. Explain how the author balances that challenge with a benefit of trees.	A challenge is that young trees need water, roots can lift pavement, or cities must pay for long-term care. The author balances this with benefits such as cooler walking areas or less heat entering buildings.
4	What does the final sentence mean when it says planners select places where trees solve a defined problem? Use one earlier detail to explain.	It means planners should plant trees where evidence shows they will address a specific need, rather than planting them everywhere. For example, temperature comparisons can identify hot blocks where shade could improve walking conditions.

PART 3 • YOUR TURN (SAMPLE ANSWER)

City leaders should plant trees near bus stops with little shade. Leaves can block sunlight before it heats pavement and benches, which could make waiting safer during heat waves. Shade on nearby building walls may also reduce the heat entering those buildings, so cooling systems may run less often. Before planting, planners should check soil space and nearby pipes. They should also choose a species that can be cared for while its roots become established. This step can prevent costly pavement damage later.

Accept equivalent claims when students use relevant passage evidence and explain how that evidence supports their thinking. For the open response, check for a clear recommendation, two accurate details from the passage, and a realistic limitation or planning step.