Shade the Route

Notice how facts from different sources develop an idea.

7.W.2.b "Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples from various sources and texts."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Circle each named source in the passage and underline one fact or explanation from each source. Number two concrete details that help you picture how heat affects a street.

How Trees Cool a City Block

1. On a July afternoon, a sidewalk beside a parking lot can feel hotter than the path through a leafy park. This difference is part of the urban heat island effect: built-up areas can be warmer than nearby places with more trees and open land. The U.S. Environmental Protection Agency (EPA) explains that dark roads and roofs absorb and hold heat from the sun. A city block with wide stretches of pavement can store heat during the day and release it later, keeping the air warmer after sunset.

2. Trees change what happens on that block. The U.S. Forest Service describes two ways trees help cool streets: their leaves shade surfaces, and trees release water vapor through a process called transpiration. Shade keeps direct sunlight off a bus-stop bench or a stretch of pavement. During transpiration, water moves from roots through a tree and exits as vapor through tiny openings in its leaves. As that water evaporates, it uses heat from the surrounding air. These processes do not erase a heat wave, but they can make a planted street more comfortable.

3. Cooling a street is not just about comfort. The Centers for Disease Control and Prevention (CDC) warns that extreme heat can cause serious illnesses, including heat exhaustion and heat stroke. Imagine walking to a library on a hot afternoon: a shaded route can offer a break from direct sunlight, while a bare route cannot. Still, a few trees cannot replace drinking water or finding an air-conditioned place when heat becomes dangerous. These details show why city planners might plant trees along busy walking routes while also providing other ways to stay safe.

2 ANSWER WITH EVIDENCE

Use the passage

1. How does the definition of the urban heat island effect help explain why the passage focuses on city streets?

2. What two facts from the U.S. Forest Service explain how trees cool a street?

3. Which example makes the idea of shade more concrete? Explain what it helps you picture.

4. How does the CDC's information add a reason for city planners to care about cooler walking routes?

3 YOUR TURN

Your own words

Propose a cooler walking route to a place you choose, including one specific change you would make. In one paragraph, use relevant information from at least two named sources in the passage and add a concrete detail of your own to explain your plan.

ANSWER KEY

Shade the Route

GRADE 7 · 7.W.2.b

PART 1 · READ AND MARK

Circle each named source in the passage and underline one fact or explanation from each source. Number two concrete details that help you picture how heat affects a street. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How does the definition of the urban heat island effect help explain why the passage focuses on city streets?	**It explains that built-up areas can be warmer than places with more trees and open land, making city streets a useful place to examine heat.**
2	What two facts from the U.S. Forest Service explain how trees cool a street?	**Tree leaves shade surfaces, and trees release water vapor through transpiration.**
3	Which example makes the idea of shade more concrete? Explain what it helps you picture.	**The bus-stop bench example helps readers picture leaves blocking direct sunlight from a surface people use.**
4	How does the CDC's information add a reason for city planners to care about cooler walking routes?	**The CDC warns that extreme heat can cause serious illnesses, so cooler routes may help people avoid some heat exposure.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I would make the walk to our community pool cooler by planting shade trees along the two blocks beside the parking lot. The EPA explains that dark pavement absorbs and holds heat, so that stretch needs attention. The U.S. Forest Service says leaves shade surfaces and trees release water vapor, both of which help cool streets. I would place trees near the sidewalk benches, where families wait for the crossing signal. Because the CDC warns that extreme heat can cause serious illness, I would also add a drinking fountain.

Accept different routes and changes if the paragraph names at least two passage sources, uses their information accurately, and adds a specific detail that supports the plan. For the marking job, accept any two concrete details that help readers picture street heat or cooling.