Where Heat Hides

Read an explanation that builds from a problem to possible solutions.

5.RI.10 "By the end of the year, read and comprehend a variety of informational text. Read and comprehend grade-appropriate text with increasing challenge in text difficulty and complexity (e.g., layout, text structure, language features…"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline one cause-and-effect statement in each paragraph. Circle a word whose meaning the passage explains nearby.

Why Some City Streets Stay Hot

1 On a sunny afternoon, two sidewalks in the same city can feel very different. A sidewalk beside dark pavement grows hot because asphalt absorbs sunlight and holds heat. After sunset, that stored heat moves back into the air, keeping nearby streets warm. This is one reason cities can stay hotter than nearby fields, even when both receive the same sunshine.

2 Trees change the story. Their branches form a canopy, a leafy cover that shades pavement before it can soak up as much sunlight. Trees also release water through their leaves. As that water evaporates, it takes heat from the air around it. A street with many trees may feel cooler than a bare street nearby, although both streets are in the same city.

3 Some neighborhoods have little room to plant trees, so planners try other methods. Light-colored roofs reflect more sunlight than dark roofs, which means the buildings absorb less heat. But a cooler roof cannot shade the sidewalk below it. To cool a whole block, a city might combine lighter roofs with trees where space allows. Each choice solves only part of the problem.

2 ANSWER WITH EVIDENCE

Use the passage

1. Why can a street stay warm after the sun sets? Explain the chain of events.

2. What does *canopy* mean in paragraph 2? Which nearby words help you tell?

3. How does paragraph 2 add to the explanation in paragraph 1?

4. A city plans to put light-colored roofs on every building but make no other changes. What part of the heat problem might this plan leave unsolved?

3 YOUR TURN

Your own words

Choose a topic other than city heat that you want to learn about. In 3 to 4 sentences, name an informational text you would choose, explain why it fits your question, and describe two ways you would use its text features or language to help you understand it.

ANSWER KEY

Where Heat Hides

GRADE 5 · 5.RI.10

PART 1 · READ AND MARK

Underline one cause-and-effect statement in each paragraph. Circle a word whose meaning the passage explains nearby. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Why can a street stay warm after the sun sets? Explain the chain of events.	**Dark asphalt absorbs and holds sunlight's heat during the day. After sunset, that stored heat moves back into the air.**
2	What does *canopy* mean in paragraph 2? Which nearby words help you tell?	**It is a leafy cover formed by tree branches. The words "a leafy cover that shades pavement" explain it.**
3	How does paragraph 2 add to the explanation in paragraph 1?	**Paragraph 1 explains how pavement holds heat. Paragraph 2 explains how trees can reduce that heat by shading pavement and cooling the air.**
4	A city plans to put light-colored roofs on every building but make no other changes. What part of the heat problem might this plan leave unsolved?	**Light-colored roofs reduce heat absorbed by buildings, but they do not shade or directly cool the sidewalks below.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I want to learn how honeybees tell other bees where to find food. I would choose a science book about bee behavior because it could explain the steps of their dance. I would use its headings to find the section about communication. I would reread sentences around unfamiliar words to work out their meanings.

Accept any supported cause-and-effect statement for each paragraph and a circled word with a nearby context clue. For Your Turn, accept a specific informational text choice, a reason it fits the student's topic, and two useful reading approaches.