Heat Trapped Here

Trace how an informational writer organizes evidence about urban heat.

9.T.T.2.a "Analyze and evaluate the use and effect of expository techniques and organizational patterns. (I)"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline words or phrases that show how ideas connect. Circle one detail in each paragraph that makes the explanation clearer, then write the organizational pattern you notice in the margin.

Why Cities Hold Heat

1 On a summer afternoon, a city block can feel far hotter than a nearby park. This difference is part of an urban heat island, a place where buildings, roads, and other developed surfaces make an area warmer than its surroundings. Dark asphalt absorbs sunlight, while grass and tree leaves shade the ground and release water vapor. The comparison between a paved block and a park helps explain the term: one surface stores heat, and the other cools the air. At night, concrete slowly releases the heat it collected during the day.

2 This stored heat affects people as well as pavement. When nighttime temperatures stay high, homes without air conditioning may remain uncomfortable, and residents have less relief after a hot day. High heat can also worsen ground-level ozone pollution, which irritates lungs. In addition, warmer streets and roofs can raise the demand for electricity as buildings run cooling systems longer. As power use rises, some power plants release more heat-trapping gases, which can contribute to further warming. Thus, heat held by city materials can lead to connected health, energy, and environmental effects.

3 Cities can reduce heat, but no single change works everywhere. A cool roof, coated with a light material, reflects more sunlight than a dark roof and can lower a building's cooling needs. Trees offer another tool: their shade limits solar heating, and their leaves cool nearby air as water evaporates. Because planting and maintaining trees takes space, water, and time, planners often combine trees with reflective roofs, shaded bus stops, and cooler pavement materials. Together, these actions can make neighborhoods safer during heat waves while offering residents more comfortable places to travel, work, and rest.

2 ANSWER WITH EVIDENCE

Use the passage

1. How does the comparison between the paved block and the park in paragraph 1 help explain an urban heat island?

2. Paragraph 2 uses a cause-and-effect pattern. What is the main cause, and what are two effects the writer gives?

3. How do the phrases “In addition,” “As power use rises,” and “Thus” shape the organization of paragraph 2?

4. Why does the writer mention that trees require space, water, and time before describing a combination of solutions in paragraph 3?

3 YOUR TURN

Your own words

Choose a school or community issue. In four sentences, explain it using either cause and effect or problem and solution, include one concrete example or comparison, and name how your organization helps readers understand the issue in the last sentence.

ANSWER KEY

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GRADE 9 · 9.T.T.2.a

PART 1 · READ AND MARK

Underline words or phrases that show how ideas connect. Circle one detail in each paragraph that makes the explanation clearer, then write the organizational pattern you notice in the margin. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How does the comparison between the paved block and the park in paragraph 1 help explain an urban heat island?	**It shows that paved surfaces absorb and store heat, while grass and trees provide shade and cooling, explaining why developed areas can be warmer.**
2	Paragraph 2 uses a cause-and-effect pattern. What is the main cause, and what are two effects the writer gives?	**The cause is heat stored by city materials. Effects include uncomfortable hot nights, worsened ground-level ozone pollution, increased electricity demand, and further warming from heat-trapping gases.**
3	How do the phrases "In addition," "As power use rises," and "Thus" shape the organization of paragraph 2?	**They add another effect, connect increased power use to a further consequence, and signal a concluding connection among the effects.**
4	Why does the writer mention that trees require space, water, and time before describing a combination of solutions in paragraph 3?	**The limitation shows that trees are not a complete solution and supports the idea that cities need several practical actions.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Near our school, the unshaded bus line becomes much hotter than the covered entrance on sunny afternoons. Because black pavement absorbs sunlight, students wait on a surface that releases heat back into the air. The school could add shade sails and plant small trees beside the line. A problem-and-solution organization helps readers see the heat concern first and then consider practical responses.

Accept equivalent descriptions of the organizational patterns and effects when students support them with passage details. For the open response, accept any accurate issue, clear use of the chosen pattern, a concrete example or comparison, and a final sentence that explains the pattern's effect.