Cooler City Clues

Synthesize details about heat, trees, and city choices.

5.6.H "synthesize information to create new understanding; and"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline details that explain how trees cool a neighborhood. Number 1, 2, and 3 beside details that show limits of planting trees or other ways cities can reduce heat, then use your marks to connect the ideas.

Cooling Down a City

1. On hot summer days, pavement and dark roofs soak up sunlight. They release that heat slowly, so neighborhoods with few trees can stay warmer than nearby parks. Scientists call this the urban heat island effect. Higher temperatures can make people use more air conditioning, which costs money and can add heat from machines to the outdoors.

2. Trees can cool a neighborhood in two ways. Their leaves provide shade, keeping sunlight from heating sidewalks and walls. Trees also release water vapor through tiny openings in their leaves. As the water evaporates, it takes heat from the air. In one study, shaded pavement was much cooler than pavement in direct sun on the same day.

3. Planting trees is not the only answer. Young trees need water, space for roots, and years to grow large enough to cast wide shade. Some cities pair tree planting with cool roofs, which reflect more sunlight than dark roofs, and shaded bus stops. Together, these choices can lower heat exposure, especially where people walk, wait, and live without air conditioning.

2 ANSWER WITH EVIDENCE

Use the passage

1. How do paragraphs 1 and 2 work together to explain why trees matter in a city?

2. Why might a city use cool roofs and shaded bus stops along with planting trees? Use details from paragraphs 2 and 3.

3. What conclusion can you draw about the best way for a city to lower heat exposure? Use information from all three paragraphs.

4. Does the passage support the idea that planting a few young trees will solve a neighborhood's heat problem quickly? Explain with two details.

3 YOUR TURN

Your own words

Write a three-sentence recommendation for cooling your school playground or another outdoor place. Combine at least two ideas from the passage, and explain why using both ideas would help.

ANSWER KEY

Cooler City Clues

GRADE 5 · TEKS 5.6.H

PART 1 · READ AND MARK

Underline details that explain how trees cool a neighborhood. Number 1, 2, and 3 beside details that show limits of planting trees or other ways cities can reduce heat, then use your marks to connect the ideas. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How do paragraphs 1 and 2 work together to explain why trees matter in a city?	**Paragraph 1 explains that pavement and dark roofs make neighborhoods hotter. Paragraph 2 explains that trees cool areas by providing shade and releasing water vapor.**
2	Why might a city use cool roofs and shaded bus stops along with planting trees? Use details from paragraphs 2 and 3.	**Trees cool places, but young trees need years to grow enough to provide wide shade. Cool roofs reflect sunlight, and shaded bus stops can help reduce heat while trees grow.**
3	What conclusion can you draw about the best way for a city to lower heat exposure? Use information from all three paragraphs.	**A city should combine trees with other cooling choices, such as cool roofs and shaded waiting areas, because pavement and roofs add heat and trees take time to grow.**
4	Does the passage support the idea that planting a few young trees will solve a neighborhood's heat problem quickly? Explain with two details.	**No. Young trees need years to grow large enough to cast wide shade, and cities may also need cool roofs or shaded bus stops to lower heat exposure.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Our school should plant trees beside the playground and add shade over the waiting area. Tree leaves block sunlight and release water vapor, but young trees will need time to grow. A light-colored roof on the playground shelter could reflect sunlight while the trees grow.

Accept responses that combine information from at least two parts of the passage rather than listing one fact. For the open task, look for a realistic recommendation, two connected ideas, and an explanation of how the choices work together.