Cooling the City

Use questions, evidence, and reflection to build meaning.

7.P.EICC.3 "Comprehension Strategies: Engage with a range of complex texts for a variety of tasks and purposes, accessing and using strategies for comprehension* before, during, and after reading as part of the meaning-making process."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Before reading, write one question in the margin based on the title. As you read, circle each cooling solution and underline details that show why one solution may not work everywhere, then write a 6 to 10 word central idea after the last paragraph.

Why Cities Stay Hot After Sunset

1 On a summer evening, a city sidewalk can remain warm long after a nearby park has cooled. This difference is called the urban heat island effect. Buildings, roads, and parking lots absorb energy from sunlight during the day. Dark pavement often absorbs more heat than light-colored ground. After sunset, these hard surfaces release stored heat slowly. Crowded neighborhoods may have fewer shaded areas and less open soil, so air and surfaces there can stay warmer than places with more trees and grass.

2 City planners use several methods to reduce this effect, but no single method works everywhere. Planting trees can shade sidewalks and buildings, while leaves release water vapor that can help cool the surrounding air. Light-colored roofs reflect more sunlight than dark roofs, which can lower roof temperatures. Some cities also replace solid pavement with materials that let rainwater soak into the ground. These choices can bring other benefits, including cleaner air, places for wildlife, and lower energy use when buildings need less air-conditioning.

3 Still, cooling a city is not as simple as adding a few trees or painting every roof white. Young trees need water and care before they provide much shade, and a pale roof may not suit every building or climate. Planners must consider cost, available space, local weather, and what residents need. The passage's examples show a larger idea: city design affects daily temperatures. When readers connect each detail to that central idea, they can judge why communities may combine several solutions rather than rely on one.

2 ANSWER WITH EVIDENCE

Use the passage

1. What question does the title suggest the passage will answer?

2. Choose two cooling solutions you circled. Explain how each solution is meant to reduce heat.

3. Which detail would you underline to show that one solution may not work everywhere? Explain what the detail means.

4. Write one sentence stating the central idea of the passage. Include at least two details from the passage.

3 YOUR TURN

Your own words

Using this passage only, write exactly three sentences: state a question you had before reading, name two details you used while reading, and explain what you understand after reading about how cities can cool down.

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PART 1 · READ AND MARK

Before reading, write one question in the margin based on the title. As you read, circle each cooling solution and underline details that show why one solution may not work everywhere, then write a 6 to 10 word central idea after the last paragraph. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What question does the title suggest the passage will answer?	**Why do cities stay hot after sunset?**
2	Choose two cooling solutions you circled. Explain how each solution is meant to reduce heat.	**Planting trees shades sidewalks and buildings, and leaf water vapor can cool air. Light-colored roofs reflect more sunlight, lowering roof temperatures.**
3	Which detail would you underline to show that one solution may not work everywhere? Explain what the detail means.	**A pale roof may not suit every building or climate. This means local conditions can affect whether a light-colored roof is a useful choice.**
4	Write one sentence stating the central idea of the passage. Include at least two details from the passage.	**City design can reduce urban heat through combined solutions, because trees provide shade, light-colored roofs reflect sunlight, and planners must consider local needs.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Before reading, I wondered why a sidewalk stays warm after a park cools. While reading, I used the details that trees shade surfaces and light-colored roofs reflect more sunlight. After reading, I understand that cities may need several solutions because each one has benefits and limits.

Accept reasonable title-based questions and central ideas that connect city design to reducing heat. For annotations, students should circle the three solutions and underline at least one limitation or planning factor from paragraph 3.