Cooling a City

Trace how details build connected central ideas in an informational text.

ELA.8.R.2 "Reading Informational Text"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the sentence in each paragraph that states its main point. Then circle two details in each paragraph that develop that point.

Mapping Urban Heat

1. On hot summer days, pavement and dark roofs absorb sunlight and release heat slowly after sunset. This makes many city blocks warmer than nearby parks or rural areas, an effect called an urban heat island. In Phoenix, Arizona, researchers use temperature sensors and satellite images to map the hottest places. Their maps often show that neighborhoods with fewer trees and more pavement stay warmer, especially at night. When health workers compare these maps with reports of heat illness, they can see where protection may be most needed.

2. To lower temperatures, cities are testing several changes. Shade trees cool sidewalks by blocking sunlight, while their leaves release water vapor that can cool nearby air. Light-colored roofs reflect more sunlight than dark roofs, and shaded bus stops give people safer places to wait. In Los Angeles, a program has coated some streets with pale material. Measurements showed lower surface temperatures on treated streets, although the coating can cause glare and does not replace shade for pedestrians.

3. These projects work best when residents help choose locations. A city might focus first on blocks where many older adults walk to transit, where homes lack air conditioning, or where few parks offer shade. Residents can also report a bus stop with no shelter or a playground that becomes too hot to use. By combining measurements with local experience, planners can spend limited funds where cooling features may protect the most people. The goal is not merely a lower number on a map, but safer daily life during heat waves.

2 ANSWER WITH EVIDENCE

Use the passage

1. What central idea does the first paragraph develop? Use two details from the paragraph to support your answer.

2. How does the second paragraph develop the ideas in the first paragraph?

3. Why does the third paragraph focus on residents and particular neighborhoods?

4. How does the text develop the idea that city cooling plans should use evidence? Use one detail from the first paragraph and one detail from the third paragraph.

3 YOUR TURN

Your own words

Write a three-sentence proposal for one cooling improvement at a local place. State a central idea, then use two details from the passage to support your proposal.

ANSWER KEY

Cooling a City

GRADE 8 · ELA.8.R.2

PART 1 · READ AND MARK

Underline the sentence in each paragraph that states its main point. Then circle two details in each paragraph that develop that point. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What central idea does the first paragraph develop? Use two details from the paragraph to support your answer.	**Urban heat islands can create dangerous heat in paved, treeless city neighborhoods, and maps can identify where protection is needed. The paragraph explains that pavement and dark roofs release heat after sunset, and maps show that areas with fewer trees and more pavement stay warmer.**
2	How does the second paragraph develop the ideas in the first paragraph?	**It moves from identifying hot areas to describing ways cities can cool them, such as planting shade trees, using light-colored roofs, and coating streets. It also explains a limit of pale street coating because it can cause glare and does not provide pedestrian shade.**
3	Why does the third paragraph focus on residents and particular neighborhoods?	**It develops the idea that cooling projects should be placed where they can protect people most. Residents can identify overheated places, and planners can prioritize people who walk to transit, lack air conditioning, or have little nearby shade.**
4	How does the text develop the idea that city cooling plans should use evidence? Use one detail from the first paragraph and one detail from the third paragraph.	**The first paragraph shows that sensors, satellite images, and heat-illness reports identify hot areas and possible risks. The third paragraph adds that planners should combine those measurements with residents' local experience when deciding where to spend funds.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Adding shade sails at unshaded playgrounds could make summer play safer. Shade blocks sunlight, and the passage explains that some playgrounds become too hot to use. Residents could identify the hottest playgrounds so the city places sails where they will protect the most people.

Accept equivalent statements of the connected central ideas, as long as students use accurate details from the passage. For the proposal, accept a reasonable local improvement supported by two relevant passage details.