

City Heat Clues

Use context clues to unpack academic and science vocabulary.

CCSS.ELA-Literacy.L.7.6 "Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline four words or phrases whose meanings you can figure out from nearby clues. Write a short meaning above each underlined term.

Why Some City Blocks Feel Hotter

- ① On a summer afternoon, the temperature on a tree-lined street can differ from the temperature in a nearby parking lot. This difference is part of the urban heat island effect. Dark roofs and pavement absorb sunlight, then release stored heat slowly. Buildings can also block breezes that would otherwise carry warm air away. As a result, crowded neighborhoods with few trees may remain hotter after sunset than nearby parks or less developed areas in the region.
- ② City planners study heat maps, which use colors to show where land-surface temperatures are highest. A map may reveal a pattern, or a repeated arrangement, of hot blocks beside cooler green spaces. Planners can use this evidence to prioritize projects in places where residents face the greatest heat exposure. For example, planting street trees provides shade. Replacing black pavement with lighter material can reflect more sunlight. These strategies can mitigate, or lessen, heat without changing the weather itself.
- ③ Heat maps are useful, but they do not tell the whole story. A surface-temperature map measures the ground or roof, not the air a person breathes. Researchers therefore compare several kinds of data, including air temperature, humidity, and residents' access to cooling centers. This broader investigation helps them evaluate whether a plan is equitable. An equitable plan gives people a fair chance to stay safe, especially older adults, outdoor workers, and families without home air conditioning. Precise vocabulary helps scientists explain both their methods and their conclusions.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 In paragraph 1, what does absorb mean as it describes pavement? Which nearby words support your meaning?

2 In paragraph 2, what does prioritize mean? Why would planners prioritize places where residents have the greatest heat exposure?

3 Which word in paragraph 2 means “lessen”? What is it meant to lessen?

4 What does equitable mean in paragraph 3? Use the author’s example to explain your answer.

3 YOUR TURN _____ Your own words

Write exactly three sentences proposing one way your school could reduce heat outdoors. Use the domain-specific word mitigate and one general academic word from the passage, such as evaluate or prioritize, accurately. Add a context clue that helps a reader understand mitigate.

PART 1 • READ AND MARK

Underline four words or phrases whose meanings you can figure out from nearby clues. Write a short meaning above each underlined term. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	In paragraph 1, what does absorb mean as it describes pavement? Which nearby words support your meaning?	Absorb means take in. The clue is that pavement later releases "stored heat slowly."
2	In paragraph 2, what does prioritize mean? Why would planners prioritize places where residents have the greatest heat exposure?	Prioritize means give first or greatest attention to. Those places need attention because residents face the most heat exposure.
3	Which word in paragraph 2 means "lessen"? What is it meant to lessen?	Mitigate means lessen. It is meant to lessen heat.
4	What does equitable mean in paragraph 3? Use the author's example to explain your answer.	Equitable means fair. An equitable plan gives people a fair chance to stay safe, especially people who may face greater risk from heat.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Our school should plant shade trees near the blacktop to mitigate, or lessen, the heat during recess. Leaders should prioritize the blacktop because students spend time there at midday. They can evaluate temperature data before and after the trees are planted.

Accept reasonable meanings that match the passage context and include relevant nearby evidence. For the open task, accept varied proposals if there are exactly three sentences, accurate use of mitigate and an academic word, and a clear context clue for mitigate.