Heat Words Matter

Academic vocabulary in a model informational text.

ELA.8.V.1.1 "Integrate academic vocabulary appropriate to grade level in speaking and writing."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline six academic words or phrases that make the explanation precise. Number three of your underlined terms and write a brief meaning for each in the margin using nearby clues.

Why Cities Hold Heat

1 On a hot afternoon, a city block can feel much warmer than a nearby park. This difference is called an urban heat island. Dark roofs, asphalt streets, and crowded buildings absorb sunlight, then release heat slowly. Trees and soil, however, provide shade and cool the air as water evaporates from leaves. The contrast is not just uncomfortable. Higher temperatures can increase energy use, worsen air pollution, and place stress on people who work or exercise outdoors.

2 City planners can mitigate this effect by changing the surfaces people see every day. A reflective roof sends more solar energy back into the atmosphere than a black roof does. Permeable pavement allows rainwater to enter the ground instead of rushing into drains, and the stored water can later evaporate. Planting trees is also an effective strategy, especially in neighborhoods with little shade. These measures do not eliminate summer heat, but they can reduce its intensity and improve public health.

3 In Phoenix, Arizona, city crews have tested lighter-colored pavement on neighborhood streets. Researchers studying heat-reduction projects measure surface temperature, air temperature, and how people use outdoor spaces. Their evidence helps leaders evaluate which designs offer the greatest benefit. The issue also involves equity. Neighborhoods with fewer trees often experience more intense heat, yet residents may have fewer resources for cooling. Careful planning can distribute protections where they are most needed and make a city more resilient during heat waves.

2 ANSWER WITH EVIDENCE

Use the passage

1. Use the term urban heat island in one sentence that explains the difference between the city block and park in paragraph 1.

2. In one sentence, use mitigate to explain how reflective roofs address city heat.

3. Based on paragraph 2, write one sentence that uses permeable to explain what happens when rain falls on this pavement.

4. Write one sentence using both equity and resilient to explain why tree planting should reach neighborhoods with little shade.

3 YOUR TURN

Your own words

Write a three-sentence proposal for reducing heat at your school. Use at least three of these academic words correctly: absorb, evaporate, intensity, evidence, distribute.

ANSWER KEY

Heat Words Matter

GRADE 8 · ELA.8.V.1.1

PART 1 · READ AND MARK

Underline six academic words or phrases that make the explanation precise. Number three of your underlined terms and write a brief meaning for each in the margin using nearby clues. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Use the term urban heat island in one sentence that explains the difference between the city block and park in paragraph 1.	**An urban heat island occurs when a city block is warmer than a nearby park.**
2	In one sentence, use mitigate to explain how reflective roofs address city heat.	**Reflective roofs can mitigate city heat by sending more solar energy back into the atmosphere.**
3	Based on paragraph 2, write one sentence that uses permeable to explain what happens when rain falls on this pavement.	**Permeable pavement lets rainwater enter the ground instead of rushing into drains.**
4	Write one sentence using both equity and resilient to explain why tree planting should reach neighborhoods with little shade.	**Equity requires tree planting in neighborhoods with little shade so the city can become more resilient during heat waves.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Our playground's dark pavement can absorb sunlight and raise the intensity of afternoon heat. I propose adding shade trees and a lighter play surface, because water can evaporate from leaves and cool the area. Evidence from temperature measurements can help the school distribute improvements to the places that need them most.

Accept accurate sentences that use each required academic term in a way that matches the passage. For the open task, require exactly three sentences, at least three listed terms used correctly, and a clear heat-reduction proposal.