Hot City Words

Use context clues and word parts to infer precise meanings.

9.L.V.2 "Word Analysis: Use word knowledge and word analysis skills to determine the meaning of unfamiliar words and phrases and to communicate effectively for a variety of purposes."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline four words whose meanings you can work out from nearby clues or word parts. Number the clue or word part that helps you infer each meaning.

Why Some Blocks Stay Hot

1 On a summer afternoon, a city block can be much hotter than a nearby park. Dark roofs and asphalt absorb solar energy, then release heat slowly after sunset. This pattern is called an urban heat island, although no land is surrounded by water. Pavement is often impermeable, meaning rain cannot soak through it into the soil. Instead, water rushes into drains, while the hard surface stores heat. Fewer trees also means less shade and less cooling from evaporation. These connected conditions can make heat waves especially dangerous for people who lack air conditioning.

2 Cities can mitigate, or reduce, this extra heat by changing surfaces and planting vegetation. A reflective roof is pale or specially coated, so it sends more sunlight back into the atmosphere instead of absorbing it. Trees cool an area in two ways. Their leaves create shade, and they release water vapor through transpiration. As that water changes from liquid to gas, it draws heat from the surrounding air. Because young trees need time to grow, planners may combine tree planting with cool roofs, shaded bus stops, and drinking-water stations.

3 These measures are not equally available in every neighborhood. In many cities, historically disinvested areas have fewer parks and more wide roads, warehouses, or parking lots. Researchers use the term inequitable to describe a condition that is not fair or evenly shared. A heat map can reveal temperature differences from one block to the next, but it does not explain every cause by itself. To plan effective improvements, city officials need local observations, such as where people wait for buses, which buildings lack cooling, and whether new trees will receive water and care.

2 ANSWER WITH EVIDENCE

Use the passage

1. What does impermeable mean in paragraph 1? Name the sentence detail that supports your meaning.

2. Use the word part and context to determine the meaning of reflective in paragraph 2. What can a reflective roof do?

3. What does transpiration mean as it is used in paragraph 2? Which nearby description gives the clue?

4. What does disinvested most likely mean in paragraph 3? Use the prefix dis- and the neighborhood details to support your answer.

3 YOUR TURN

Your own words

Write exactly two sentences about a neighborhood improvement that is not named in the passage. Put parentheses around one precise word with a meaningful prefix, suffix, or root, and include a context clue that explains the word's meaning.

ANSWER KEY

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GRADE 9 · 9.L.V.2

PART 1 · READ AND MARK

Underline four words whose meanings you can work out from nearby clues or word parts. Number the clue or word part that helps you infer each meaning. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What does impermeable mean in paragraph 1? Name the sentence detail that supports your meaning.	**Impermeable means not allowing water to pass through. The passage says rain cannot soak through it into the soil.**
2	Use the word part and context to determine the meaning of reflective in paragraph 2. What can a reflective roof do?	**Reflective means able to send light back. A reflective roof sends more sunlight back into the atmosphere instead of absorbing it.**
3	What does transpiration mean as it is used in paragraph 2? Which nearby description gives the clue?	**Transpiration is the release of water vapor from leaves. The clue says water changes from liquid to gas and draws heat from the surrounding air.**
4	What does disinvested most likely mean in paragraph 3? Use the prefix dis- and the neighborhood details to support your answer.	**Disinvested means having received too little investment or having resources withdrawn over time. The areas have fewer parks and more roads, warehouses, or parking lots.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

The neighborhood center installed a (refillable) bottle-filling station, so people can fill the same container again instead of throwing it away. This change reduces the number of single-use plastic bottles in trash bins.

Accept equivalent definitions when students support them with accurate passage details or word-part reasoning. For Part 3, accept any two-sentence response with a marked word, a meaningful word part, and a clear context clue.