Heat Clue Hunt

Use context and word parts to unlock academic vocabulary.

11.P.EICC.3.g "Determine the meanings of unfamiliar words and concepts by applying knowledge of context and of academic vocabulary and word parts. (I)"

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two unfamiliar or challenging words. Circle nearby clues and number any useful word parts that help you infer each meaning, so you can justify your thinking.

Mapping the Hottest Blocks

1. On a July afternoon, researchers in Phoenix, Arizona, walked blocks with small temperature sensors attached to bicycles. Their goal was to map microclimates, small areas whose conditions can differ from those of the surrounding city. A shaded bus stop, for example, may be cooler than an exposed parking lot only a block away. The team recorded air temperature, surface temperature, wind, and shade at the same time. Their first map was provisional because one afternoon of measurements could not show patterns across an entire season. Still, it revealed several unusually hot routes used by pedestrians.

2. To explain the hot routes, the researchers compared their readings with maps of pavement, trees, and building materials. Dark asphalt absorbed much of the Sun's energy, then released heat after sunset. By contrast, streets with dense tree canopies stayed cooler. The researchers noticed correlations between low shade and high surface temperatures, yet they avoided claiming that one observation alone proved a cause. A neighborhood with few trees might also have wide roads or large roofs. To test competing explanations, the team would need repeated measurements in different weather conditions.

3. City planners used the preliminary map to choose places for a pilot project, a small trial before a larger decision. At one transit stop, they considered retrofitting an existing shelter with a wider roof and panels that block direct sunlight. They also considered pale pavement, which reflects more solar energy than dark asphalt. These changes are forms of heat mitigation. They would not eliminate summer heat, but they could reduce a person's exposure while waiting for a bus. Before spending public money broadly, planners would compare temperatures and pedestrian use at improved and unimproved stops.

2 ANSWER WITH EVIDENCE

Use the passage

1. What does provisional most nearly mean in paragraph 1? Name the context clue that supports your answer.

2. Use the context in paragraph 2 to infer the meaning of correlations. What relationship did the researchers notice?

3. What does retrofitting most likely mean in paragraph 3? Use both retro- and the description of the shelter in your answer.

4. What does mitigation most nearly mean in this passage? Which words in the final paragraph help you infer its meaning?

3 YOUR TURN

Your own words

Write three sentences about a school improvement project. Use one unfamiliar-looking academic word built with a prefix or suffix, underline the word, and circle two context clues that help a reader infer its meaning.

ANSWER KEY

Heat Clue Hunt

GRADE 11 · 11.P.EICC.3.g

PART 1 · READ AND MARK

Underline two unfamiliar or challenging words. Circle nearby clues and number any useful word parts that help you infer each meaning, so you can justify your thinking. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What does provisional most nearly mean in paragraph 1? Name the context clue that supports your answer.	**Provisional means temporary or not final. The clue is that one afternoon of measurements could not show patterns across an entire season.**
2	Use the context in paragraph 2 to infer the meaning of correlations. What relationship did the researchers notice?	**Correlations are relationships or patterns between two things. The researchers noticed that lower shade was connected with higher surface temperatures.**
3	What does retrofitting most likely mean in paragraph 3? Use both retro- and the description of the shelter in your answer.	**Retrofitting means changing or adding features to something that already exists. The existing shelter would receive a wider roof and sunlight-blocking panels.**
4	What does mitigation most nearly mean in this passage? Which words in the final paragraph help you infer its meaning?	**Mitigation means reducing a harmful effect. The clues are that the changes would not eliminate summer heat but could reduce a person's exposure.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

After a small paint spill, the art room needed __decontamination__. Workers (removed the spilled material) and (washed the tables) before students returned. The prefix de- supports the idea of taking something away.

Accept reasonable synonyms when the student uses accurate context clues or word-part knowledge. For the open task, accept any three-sentence response with a correctly used prefixed or suffixed word and two clues that support its meaning.