Heat and Evidence

Weigh evidence and actions in a community decision

E.P.1.1.C "Gather and evaluate information regarding complex problems, assessing individual and collective actions taken to address them."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline three pieces of information people gathered, and circle a limit of each one. Number one individual action and one collective action to help you compare what they can do.

A Hot Bus Stop

1. In the fictional city of Riverton, people waiting for the bus beside a wide parking lot felt the pavement radiate heat after sunset. Several riders asked the city to open a nearby library later on hot days. Before deciding, a student team measured air temperature at the bus stop and under trees in a park at 4 p.m. on five clear days. The stop was warmer on all five days, but the team had not measured overnight temperatures or recorded how many riders became ill. Their readings showed a pattern at two places, not the health effects of heat across the city.

2. The city health office reported that calls about heat illness rose during a July heat wave, but its report did not say which neighborhoods the callers lived in. A rider group surveyed 26 people at the bus stop; 19 said they could not reach the library before its usual closing time. Because the group questioned people at one stop, its results could miss riders on other routes. Together, the readings, health report, and survey suggest reasons to act, yet none proves that longer library hours would prevent illness. The city could collect more detailed information while testing a response.

3. Some riders brought water and checked on neighbors who traveled alone. These individual steps might ease immediate risks, but they cannot change library hours or create shade. The city extended library hours on three hot evenings, and a neighborhood association posted the schedule at bus stops. Attendance records showed 41 visits during those evenings, although the city did not record whether visitors came because of the heat. To judge the trial, officials could ask visitors why they came and ask riders whether the longer hours made the library reachable. Attendance alone shows use, not whether the response reduced heat illness.

2 ANSWER WITH EVIDENCE

Use the passage

1. What do the student team's temperature readings show, and what important question can they not answer?

2. How does the way the rider group gathered its survey responses limit what the city can conclude?

3. Compare one action taken by riders with one action taken by a group or the city. What can the collective action change that the rider's action cannot?

4. Why are 41 library visits not enough to judge whether extended hours addressed heat illness? What information named in the passage would help evaluate the trial?

3 YOUR TURN

Your own words

Choose a different local problem and write 5 to 6 sentences proposing how to investigate it. Name two kinds of information you would gather, a limit you would check, one individual action, one collective action, and how you would judge whether the actions worked.

ANSWER KEY

Heat and Evidence

HIGH SCHOOL · E.P.1.1.C

PART 1 · READ AND MARK

Underline three pieces of information people gathered, and circle a limit of each one. Number one individual action and one collective action to help you compare what they can do. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What do the student team's temperature readings show, and what important question can they not answer?	**The bus stop was warmer than the park on five clear afternoons. The readings cannot show overnight temperatures or whether heat made riders ill.**
2	How does the way the rider group gathered its survey responses limit what the city can conclude?	**The group surveyed people at only one bus stop, so the results might not represent riders on other routes.**
3	Compare one action taken by riders with one action taken by a group or the city. What can the collective action change that the rider's action cannot?	**A rider can bring water, while the city can extend library hours. Bringing water may ease an immediate risk, but only the city can change when the library is open.**
4	Why are 41 library visits not enough to judge whether extended hours addressed heat illness? What information named in the passage would help evaluate the trial?	**The count does not show why people visited or whether anyone avoided illness. Officials could ask visitors why they came and riders whether the later hours made the library reachable.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Trash is collecting beside a creek near our school. I would count pieces of litter at the same marked spots each week and ask neighbors when they notice the most trash. I would check whether rain between counts washes trash away, making a lower count misleading. An individual could carry reusable containers, while the school and city could add covered bins near the creek. We could compare litter counts before and after the bins are installed and ask whether neighbors find them easy to use.

Accept answers that distinguish what each source or action shows from what it cannot establish. For Part 3, look for two relevant information sources, a plausible limit, both types of action, and a way to evaluate results.