

Maps That Decide

Follow an explanation from measurement to a justified choice.

11.P.EICC.2.c "Explain and learn concepts and processes by interpreting and constructing texts. (I/C)"

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the sentence introducing each numbered stage, 1 through 4. Circle the sentence explaining what an association cannot prove. Use these marks to trace how the explanation connects evidence, limits and decisions.

From Heat Readings to City Choices

- ① City temperatures can differ from block to block. Roads and roofs absorb and release heat; limited vegetation also means less cooling from shade and water released by plants. A heat map, a visual display of temperatures across an area, can help planners investigate these differences. The following hypothetical city project illustrates a process; it is not a report of actual local measurements. Its purpose is to explain how evidence can inform a choice without pretending that numbers make the choice themselves.
- ② Stage 1: Collect comparable air-temperature readings at selected sites. Staff use the same measurement procedure at sidewalks, bus stops and parks, recording at matched times on several days so one unusual reading does not dominate. Stage 2: Compare the readings with information about each location. Staff examine shade, building materials and wind conditions, using land-cover images to locate vegetation and pavement. An association between higher temperatures and pavement does not prove that pavement alone caused the heat. Air readings are not interchangeable with measurements of a surface such as asphalt; the team keeps its measurement type consistent.

- ③ Stage 3: Interpret the pattern alongside information about community needs. Planners consider who spends time in the hot areas and what cooling resources they can access; equally hot places may have different priorities. Stage 4: Use the evidence to compare possible responses. Officials and residents might discuss shade at a busy stop or another feasible cooling measure, considering costs and access as well as temperature. The map becomes a decision-making text by making the evidence behind a proposed priority visible. It supports a public discussion rather than dictating an answer. Science background: U.S. EPA, What Are Heat Islands?, epa.gov/heatlands/what-are-heat-islands.

2 ANSWER WITH EVIDENCE Use the passage

- 1 Why does stage 1 require a consistent procedure, matched times and several days? Explain what each contributes.

- 2 Explain the difference between an association and a proven cause using stage 2.

- 3 Why can equally hot places receive different priorities in stage 3? What would a temperature-only explanation omit?

- 4 Connect stages 2 and 4: how does explaining limits improve the decision-making text?

3

YOUR TURN

Your own words

Write one paragraph of 90 to 110 words explaining how your school could use evidence to make a decision about a shared-space problem. Include three numbered process stages, define one term with an appositive, state one limit on the evidence, and explain how the evidence could guide a decision.

Explain a complete process

Write the required 90-110-word paragraph below. Keep 1., 2. and 3. within that paragraph. An appositive renames a noun beside it, as in "a queue count, the number waiting at a given time." Check that your proposed measurement actually supports your inference.

PART 1 • READ AND MARK

Underline the sentence introducing each numbered stage, 1 through 4. Circle the sentence explaining what an association cannot prove. Use these marks to trace how the explanation connects evidence, limits and decisions. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Why does stage 1 require a consistent procedure, matched times and several days? Explain what each contributes.	The procedure makes readings more comparable; matched times reduce time-of-day differences; repeated days reduce reliance on one unusual reading. These controls improve comparison without eliminating every influence.
2	Explain the difference between an association and a proven cause using stage 2.	A hotter paved location shows an association. Shade, wind and other conditions may also contribute, so this comparison alone does not isolate pavement as the cause.
3	Why can equally hot places receive different priorities in stage 3? What would a temperature-only explanation omit?	People use places differently and have different access to cooling. Temperature alone omits exposure and available resources, both relevant to the need for a response.
4	Connect stages 2 and 4: how does explaining limits improve the decision-making text?	Acknowledging other influences prevents an overconfident claim about a single cause. The map can support comparison of possible responses while officials and residents also consider costs, access and community needs.

PART 3 · YOUR TURN (SAMPLE ANSWER)

1. To investigate cafeteria lines, staff could count students waiting at each serving station every five minutes during lunch for one week. A queue count, the number waiting at a given time, would show when queues are longest during those observations. 2. Staff should compare counts across days, noting attendance and menus; one week may not represent the whole year. 3. The school could use repeated crowding at one station to consider a second station or different release times. The counts would inform a trial, while schedules and staffing would also shape the decision.

The four marked stage sentences begin Stage 1: Collect, Stage 2: Compare, Stage 3: Interpret and Stage 4: Use. The circled limit begins "An association." Accept equivalent supported explanations. The constructed paragraph must have 90-110 words, three numbered stages, an appositive definition, a meaningful evidence limit and a decision logically informed by the proposed measurements. Entry counts alone do not measure how many people are waiting. The model is a hypothetical school process, not a claim about an actual school. EPA science background checked September 11, 2026.