The Pump Question

Weigh evidence and competing explanations of a cholera outbreak.

WG.P.1.2 "Develop practices which demonstrate an understanding that social studies involves the evaluation of evidence. Develop, investigate, and evaluate plausible answers to essential questions that reflect enduring understandings across time..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline two details that support Snow's explanation, circle two limits of the evidence, and number the two competing interpretations of the pump handle's removal. Use your marks to decide which claims the evidence can support.

What Did the Pump Prove?

1. In 1854, cholera struck the area around Broad Street in London. Many residents believed that foul-smelling air spread the disease. Physician John Snow suspected contaminated drinking water instead. He recorded where people who died had lived and marked deaths near the Broad Street water pump. That pattern raised a question: Was the pump linked to the outbreak? Yet distance alone could not answer it. People close to the pump might also share crowded housing or other risks. Snow needed evidence about which water people actually drank, not just where they lived.

2. Snow investigated cases that did not fit a simple distance rule. Some people who lived farther away became ill after getting water from the Broad Street pump. Workers at a nearby brewery, which had its own water supply, had relatively few cholera cases. These details strengthened the water explanation, though they did not measure every person's exposure. Snow's firsthand case reports offer clues about individual habits, but they depend on what witnesses remembered or what investigators recorded. A careful reader can use these reports while still asking who was left out and whether other explanations fit.

3. Officials removed the pump handle, but the outbreak was already declining. One interpretation credits the removal with stopping cholera; another argues that the timing makes this claim uncertain. Both interpretations can agree that Snow's evidence linked the pump to many cases without proving the handle's removal ended the outbreak. To test the competing explanations, an investigator could compare daily illness records before and after the removal and examine whether families had already stopped using the pump. Even that comparison needs care: reported cases may lag behind infections, and other changes may have happened at the same time.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which two details support Snow's water explanation more strongly than people's home addresses alone? Explain why.

2. What makes Snow's case reports useful evidence, and what limits their reliability?

3. Where do the two interpretations of the pump handle's removal agree, and where do they disagree?

4. Why would daily illness records alone not settle whether removing the handle ended the outbreak?

3 YOUR TURN

Your own words

A museum asks you to investigate whether access to affordable drinking water differed among London neighborhoods in 1854. Write a brief inquiry plan with a supporting question, a tentative answer, two kinds of historical evidence to seek, a possible disagreement to test, and a finding that would change your view.

The Pump Question

PART 1 · READ AND MARK

Underline two details that support Snow's explanation, circle two limits of the evidence, and number the two competing interpretations of the pump handle's removal. Use your marks to decide which claims the evidence can support. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which two details support Snow's water explanation more strongly than people's home addresses alone? Explain why.	**Some people who lived farther away became ill after getting pump water, while nearby brewery workers with their own water supply had relatively few cases. Both details connect illness to water use rather than distance alone.**
2	What makes Snow's case reports useful evidence, and what limits their reliability?	**They provide firsthand clues about people's habits, but witness memories and investigators' records may be incomplete.**
3	Where do the two interpretations of the pump handle's removal agree, and where do they disagree?	**Both can accept that evidence linked the pump to many cases. They disagree about whether removing the handle stopped the outbreak.**
4	Why would daily illness records alone not settle whether removing the handle ended the outbreak?	**Reported cases may lag behind infections, and other changes, such as families stopping use of the pump, may have affected the outbreak.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

My supporting question is: Did households in different neighborhoods pay different amounts for drinking water in 1854? I tentatively think poorer neighborhoods may have faced a greater cost compared with household income. I would seek water-company rate records and residents' complaints in local archives. The rates might look similar across neighborhoods, while complaints might describe unequal access to deliveries. I would check whether the records cover the same year and the same kinds of households. Evidence that low-income households consistently paid less and received dependable deliveries would make me revise my tentative answer.

Accept other passage-based evidence and limitations when students explain how each affects a claim. In the inquiry plan, look for a testable question, distinct evidence sources, a plausible disagreement, and a specific reason to revise the tentative answer.