

Clues on Broad Street

Analyze how historical visuals build and test an explanation.

9.RI.1.B "Explain the purpose and interpret the use of data and information in maps, charts, graphs, timelines, tables, and diagrams in informational, historical, scientific, or technical texts."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each sentence that names a visual, and circle the words that explain what the visual helps readers understand. Your marks should show how each visual supports a different part of the investigation.

Mapping a Cholera Outbreak

- ① In 1854, a severe cholera outbreak struck the Soho neighborhood of London. Physician John Snow investigated whether the disease spread through the air or through contaminated water. His famous street map placed a short bar beside each address where a death occurred and labeled nearby water pumps. The bars clustered around the Broad Street pump, rather than spreading evenly across the neighborhood. The map's purpose was not simply to show streets. By connecting locations of deaths to water sources, it gave readers spatial evidence that could test Snow's explanation.
- ② A second display, a bar graph, compared deaths at homes located different distances from the Broad Street pump. Taller bars appeared close to the pump, so readers could quickly compare groups without studying every address. A table added information the graph could not show. It listed the nearby brewery and workhouse, whose people used other drinks or another water supply, and recorded far fewer deaths. The table's purpose was to examine exceptions. Those groups lived near the pump but had less exposure to its water, which strengthened the argument that water, not distance alone, mattered.
- ③ A timeline placed the outbreak, Snow's investigation, and the removal of the pump handle in order. Its purpose was to help readers judge sequence, including whether an action happened before or after deaths declined. A cutaway diagram showed the pump well below ground beside possible sources of waste. Unlike the map, the diagram did not count deaths or prove the route of infection. Instead, it illustrated a possible physical mechanism for contamination. Together, the visuals serve different purposes: the map and graph reveal patterns, the table tests exceptions, and the timeline and diagram explain sequence and process.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 How do the map's death bars and pump labels work together to support Snow's explanation?

2 Why did the writer include both a bar graph and a table?

3 What can the timeline help a reader judge that the map cannot show clearly?

4 Why does the passage say that the cutaway diagram does not prove the route of infection?

3 YOUR TURN _____ Your own words

In three sentences, propose one visual for a school investigation into indoor air quality. Name the visual, explain what data or information it would show and why, then state one limit of that visual.

PART 1 • READ AND MARK

Underline each sentence that names a visual, and circle the words that explain what the visual helps readers understand. Your marks should show how each visual supports a different part of the investigation. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How do the map's death bars and pump labels work together to support Snow's explanation?	They connect where deaths occurred with nearby water sources, showing a cluster around the Broad Street pump and providing spatial evidence for contaminated water.
2	Why did the writer include both a bar graph and a table?	The bar graph allows quick comparison of deaths by distance from the pump, while the table examines exceptions involving groups that used other drinks or water supplies.
3	What can the timeline help a reader judge that the map cannot show clearly?	The timeline helps the reader judge sequence, including whether an action occurred before or after deaths declined.
4	Why does the passage say that the cutaway diagram does not prove the route of infection?	The diagram illustrates a possible physical mechanism for contamination, but it does not provide death data or establish cause and effect.

PART 3 • YOUR TURN (SAMPLE ANSWER)

For a school investigation, I would use a line graph to show carbon dioxide readings in one classroom every hour from 8 a.m. to 3 p.m. Its purpose would be to reveal when ventilation may be lower and whether opening windows changes the pattern. The graph could show a pattern, but it could not prove that one specific event caused each change.

Accept equivalent explanations that connect each visual's form and information to its purpose. For Part 3, accept any appropriate visual if the response identifies its data, intended interpretation, and a reasonable limitation.