Smoke and Solutions

Evaluate evidence and responses to a public health problem

TOT.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 sources of information about the smoke, circle individual and collective actions, and number a limit beside each action it affects.

When Smoke Reached New York City

1 In June 2023, smoke from Canadian wildfires turned New York City skies orange. Fine particles in smoke can enter lungs and worsen breathing problems. To judge the danger, residents could check the U.S. Environmental Protection Agency's Air Quality Index, which uses measurements from monitoring stations and reports conditions by location. A photograph of an orange sky showed that something unusual was happening, but it could not measure how much pollution people breathed. Even monitor readings had limits: pollution could vary by neighborhood and hour. Comparing readings from several times and places gave a sounder picture than relying on one image.

2 People took individual steps. Some stayed indoors, closed windows, or wore well-fitting N95 masks outdoors. These choices could reduce exposure to smoke particles, but not everyone could avoid a shift outside or live in a building that kept smoky air out. A mask that fits poorly offers less protection. Individual choices also could not stop smoke from reaching the city. To assess whether a particular step helped, a resident might compare indoor and outdoor particle readings, if available, while noting that conditions changed over time. A single person's cough improving would be weak evidence that the city's air had improved.

3 City agencies also responded. New York City made free masks available and public schools limited outdoor activities. These measures reached people who might not have bought masks or chosen to cancel activities on their own. Still, a free mask only helps if someone can get one and wear it correctly, and school rules do not protect every outdoor worker. Comparing monitor readings before and after these actions would not prove that the actions cleaned the air: wind and rain also change smoke levels. Evidence about who benefited would include where masks were distributed, who received them, and how much time students spent outside.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which gives stronger evidence of smoke pollution, an orange-sky photograph or monitor readings from several times and places? Explain one limit of the stronger source.

2. Evaluate wearing an N95 mask as an individual response. How could it help, and what limits its usefulness?

3. How did the city's actions address needs that individual choices might not meet? Identify one group the actions could still miss.

4. Someone claims that falling monitor readings after masks were distributed prove the masks cleaned the air. Evaluate the claim and name evidence that would better show whom the mask program reached.

3 YOUR TURN

Your own words

A heat wave puts residents of an apartment building at risk. In 5 to 6 sentences, propose one individual action and one collective action, explain a limit of each, and identify two kinds of information you would gather to evaluate the actions. Explain why one source would be more useful than a social media post about one person's experience.

ANSWER KEY

Smoke and Solutions

HIGH SCHOOL · TOT.P.1.1.C

PART 1 · READ AND MARK

Underline sources of information about the smoke, circle individual and collective actions, and number a limit beside each action it affects. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which gives stronger evidence of smoke pollution, an orange-sky photograph or monitor readings from several times and places? Explain one limit of the stronger source.	**Monitor readings from several times and places are stronger because they measure pollution. They may still miss differences between neighborhoods or hours.**
2	Evaluate wearing an N95 mask as an individual response. How could it help, and what limits its usefulness?	**A well-fitting N95 mask could reduce exposure to smoke particles. A poor fit offers less protection, and a mask cannot stop smoke from reaching the city.**
3	How did the city's actions address needs that individual choices might not meet? Identify one group the actions could still miss.	**Free masks could reach people who might not buy them, and school rules limited students' outdoor time. Outdoor workers were not protected by school rules.**
4	Someone claims that falling monitor readings after masks were distributed prove the masks cleaned the air. Evaluate the claim and name evidence that would better show whom the mask program reached.	**The claim is unsupported because masks do not clean outdoor air, and wind or rain can change readings. Distribution locations and records of who received masks would better show the program's reach.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

One resident could visit a cooled public space, but travel may be difficult for someone with limited mobility. Building residents could work with the city to open a staffed cooling room, though it would help only people who can reach it. I would gather temperature readings in apartments and the cooling room at the same times. I would also ask residents whether they used the room and what prevented them from going. Repeated temperature readings are more useful for comparing heat exposure than one social media post about feeling cooler. The resident responses would help show whom the cooling room misses.

Accept other passage-supported limits and evidence. For Part 3, look for distinct individual and collective actions, a realistic limit of each, and information that could help evaluate their effects or reach.