Name _____



Citizen Science: How Particulate Matter Pollution Affects a Community

<u>Data</u>

	People living within 200 feet of a major roadway	People living between 200 feet and 1,000 feet of a major roadway	People living beyond 1,000 feet of a major roadway
Cardiovascular disease rate			
Lung function in women (volume of air)			
% of children with asthma who went to the ER in the last year for asthma symptoms			
COPD (bronchitis) rates (women)			

What do each of these health effects mean?

•	Cardiovascular disease:
•	Lung function:
•	Childhood emergency room visits for asthma:
•	COPD (bronchitis/emphysema):

Analysis

For each variable, decide whether the data goes up, goes down, or neither the farther you get from the roadway:

•	Cardiovascular disease:
•	Lung function:
•	Childhood emergency room visits for asthma:
•	COPD:
or neith	ch variable, decide whether the health outcome gets better (healthier), worse (less heathy), her the farther away you get from the roadway. Remember, just because a number goes up on doesn't mean it's getting better or worse:
•	Cardiovascular disease:
•	Lung function:
•	Childhood emergency room visits for asthma:
•	COPD:
health Write tl <blank< td=""><td>ch variable, decide how big the difference in health outcome is between the 200-foot outcomes and the 1,000-foot health outcomes (ex. what is the difference in the numbers?). he difference as a part of a complete sentence (ex. the cardiovascular disease rate is > percent lower/higher at less than 200 feet away compared to 1,000 or more feet away.) Cardiovascular disease:</td></blank<>	ch variable, decide how big the difference in health outcome is between the 200-foot outcomes and the 1,000-foot health outcomes (ex. what is the difference in the numbers?). he difference as a part of a complete sentence (ex. the cardiovascular disease rate is > percent lower/higher at less than 200 feet away compared to 1,000 or more feet away.) Cardiovascular disease:
•	Lung function:
•	Childhood emergency room visits for asthma:
•	COPD:

Create graphs of each variable using graph paper provided by your teacher, or use a computer to make your graphs.

Conclusions

Based on these data, and other things you have learned throughout this investigation, do you think that living near a major roadway poses a health risk to humans? Write a claim-evidence-reasoning statement to make an argument based on your research. Use the guide below to help with your statement:

	Claim: Your claim should answer the question about whether living near a roadway poses a health risk.
1	Evidence: Your evidence should use data from the activity to support your claim.
!	Reasoning: Your reasoning should explain how your evidence supports your claim. It should answer the question: how can living near a roadway affect a person's health? You will need to use information you learned earlier in the investigation for your reasoning.