

PROMPT 2: Mitigating the Impact of Heat Waves

Heat waves generally cause the highest number of weather related fatalities (<https://www.weather.gov/hazstat/>) and these fatalities are often greatest in urban areas due to higher density of humans and the urban heat island.

To Do

As an intern in Detroit's Office of Sustainability you are challenged to create a plan for Detroit that addresses the following:

1. What defines a "heat wave" event meteorologically?
2. Why are heat waves more likely to affect urban areas than rural areas?
3. Why is it that mortality in heat waves is higher in less prosperous socio-economic populations? And
4. What is one strategy that might be beneficial in lowering the rate of mortality in urban areas, including an explanation of what this strategy is, how it works, and why it might be effective. You can also consider pros and cons of this approach.?

Requirements

- 500 words max, cite all resources used. Include citations in text and include a references section at end (not part of 500 word limit)
- Research plans that Detroit and other cities have already implemented or planned.
- Write as if your audience has limited knowledge on what heat waves are and the extent of mortality associated with them.
- Describe what conditions lead to deadly heat waves.
- Describe what a "heat island" is and how the materials and structures in an urban area affect their severity.
- Describe why these conditions affect less affluent populations at a higher rate.
- Offer a plan for what the government could do to mitigate the effects of heat waves on their citizens.
- Address how this strategy would be implemented.

Resources

- <https://www.epa.gov/heatislands/learn-about-heat-islands>
- <https://scied.ucar.edu/longcontent/urban-heat-islands>
- <https://yaleclimateconnections.org/2015/08/new-analysis-of-2003-fatal-paris-heat-wave/>

Assessment

1. [Heat wave is accurately described, including the importance of nighttime temperatures].
2. [Description of why urban areas experience more heat waves].
3. [Explanation of disproportionate impacts on heat waves on people with lower socioeconomic standing].
4. [Is the strategy explained well and is it realistic?].
5. [Citation of sources]

Peer-Review Assessment

- Has the author correctly identified what conditions define a heat wave? What might be missing or could be improved?
- Has the author explained why urban areas are more likely to suffer heat waves? What is one thing they could improve?
- Has the author explained why less prosperous socio-economic populations are more likely to be affected? What more would you like to know?
- Has the author offered a strategy for mitigating the heat wave mortality? Are the strategies realistic in terms of effort and cost? Why or why not?
- Are sources correctly cited and does it include both in-text citations and a works cited section?