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Essay 4: Science Literacy Comparison on Climate Change

No one could have said it any better than the Lorax, “Unless someone like you cares a whole awful lot, nothing is going to get better, it’s not”. Just as the Once-ler from Dr. Seuss’ *The Lorax*, we as a people have been ignorant to an event that will eventually transform our beautiful world into one that will no longer be sustainable if steps are not taken to ensure that its effects are reduced. The impact of climate change in the future will not only determine what our country would look like, but what our world would look like. Before I conducted any research, I thought I was informed on climate change, but I really never thought about it past what I already “knew”. After researching further, I concluded that individuals should be properly informed because global climate change will have a devastating impact on future generations, our oceans, and animals. Ignorance will no longer exist if people are made aware. After comparing my prior knowledge of climate change to actual scientific research, I am better informed and have a basic understanding of its causes, effects, and solutions; however, I was not aware of the complexity of it all!

Many factors contribute to the acceleration of climate change, and the causes have been debated for years. Many individuals and professionals have come to a consensus: carbon dioxide emissions. I stated in my science literacy narrative “from what I’ve learned, global climate change has a lot to do with the human population-- exposing the environment to harmful toxins/pollutants” (Johnston 1). Researching further, I noticed I had the right idea in my science

literacy narrative. According to NASA, “there's a more than 95 percent probability that human activities over the past 50 years have warmed our planet”. The industrial activities depend on the burning of fossil fuels, raising carbon dioxide levels in the atmosphere. It was also concluded that “there's a better than 95 percent probability that human-produced greenhouse gases such as carbon dioxide, methane and nitrous oxide have caused much of the observed increase in Earth's temperatures over the past 50 years” (“Climate Change Causes”). Evidence heavily points towards the human population; however, many people are ignorant of the damage their actions are doing to the environment. I stated in my literacy narrative that “...the ignorance of the public is due to the lack of education about the problem, so it's not taken seriously” (Johnston 1). Many scientists do not list ignorance as one of the issues, but I believe it should be one. If the human population was made aware of this, they would understand the severity of the situation and would take action.

The lasting effects of climate change are drastically altering the atmosphere around us; however, we do not take the time to notice. Originally, I did not know that it was impacting us now but knew it would worsen in the future. In my science literacy narrative, I put “some effects of global climate change are: icebergs melt (sea level rises), high levels of fluctuation in temperature, natural disasters are more extreme/deadlier, potential health risks, and exposure to toxic radiation” (Johnston 2). After further research, I noticed that I had the right idea with some of the effects, however, the research expanded on my ideas more. According to the National Oceanic Atmospheric Association (NOAA), changes to the water resources are in critical condition with the threat of drought. Drought conditions, rising temperatures, and severe weather create “significant challenges for the farmers and ranchers who put the food on our tables”. The food supply is dependent on the climate and weather, but the climate change impacts it. Climate

change also impacts human health. The changing environment provides a vulnerability, this change is “expected to cause more heat stress, an increase in waterborne diseases, poor air quality, extreme weather events, and diseases transmitted by insects and rodents” (“Climate Change Impacts”). However, according to NASA, change will continue— “temperatures will continue rise, frost-free seasons and growing seasons will lengthen, there will be changes in precipitation patterns, sea level will rise, and hurricanes will become stronger and more intense, and more heat waves and droughts will occur” (“Future Effects”). These effects will impact all humans, but in different levels of severity. It is necessary for the human population to be aware of the extent of the problem, so that preparations can be made to lessen our vulnerability to its future impact.

Climate change is a problem that will never truly go away, however there are actions that can be made to prevent and even weaken its severity. When I jotted down ideas for my science literacy narrative, my possible solutions were “reduce emissions- reduction of burning fossil fuels, grow plants to trap CO₂, stop cutting down trees, consume less- “think green”, and use less electricity” (Johnston 3). As I found out, my ideas for solutions were very elementary compared to the actual science professionals; however, I had the right idea. After completing some research, I found two scientists who had suggested four “high impact” actions that would “substantially reduce” an individual’s “annual personal emissions”: “having one fewer child, living car-free, avoiding airplane travel and eating a plant-based diet” (Nicholas, Wynes). These actions “have much greater potential to reduce emissions than commonly promoted strategies” according to Nicholas and Wynes. Though these are great ideas, they do not seem as popular. NASA has offered solutions as well that could be a game changer, Mitigation and Adaptation. Mitigation involves “reducing the flow of heat-trapping greenhouse gases into the atmosphere,

either by reducing the sources or creating ‘sinks’ that accumulate and store these gases” and its goal is to avoid “human interference” with the climate and to “stabilize greenhouse gas levels in a timeframe sufficient to allow ecosystems to adapt naturally to climate change”. On the other hand, adaptation involves adjusting to the current or “expected future climate” and the goal “is to reduce our vulnerability to the harmful effects of climate change” (“Mitigation and Adaptation”). Adaptation seems more favorable because climate change cannot be stopped, so adapting to the changing environment lessens vulnerability. Individuals need to see that their actions contribute to climate change and that “solutions” have been put in place to delay its consequences. Another example of ignorance to the problem is that global climate change has become political, and breaks people up into sides. If that political concept was taken out of the picture, I believe individuals would see the severity of the situations and do something about it.

After researching, I have concluded that climate change is very real and impacts life as we know it. Comparing prior knowledge through a science literacy narrative with actual scientific research showed me that I had the basic knowledge, but that I did not understand fully the complexity of it all. Many individuals are not educated or informed about the severe impact of climate change. This lack of being informed is what contributes to complete ignorance and hinders action from being taken to ensure our environment has a hopeful future. Unless we care a whole awful lot about this issue, nothing will get better.

Works Cited

- “Climate Change Causes: A Blanket around the Earth.” *National Oceanic and Atmospheric Administration (NASA)*, 2018, <https://climate.nasa.gov/causes/>.
- “Climate Change Impacts.” *National Oceanic and Atmospheric Administration*, www.noaa.gov/resource-collections/climate-change-impacts.
- “Future Effects.” *National Aeronautics and Space Administration (NASA)*, 2018, <https://climate.nasa.gov/effects/>.
- “Global Climate Change: Effects.” *National Aeronautics and Space Administration (NASA)*, November 2018, <https://climate.nasa.gov/effects/>.
- “Mitigation and Adaptation.” *National Aeronautics and Space Administration (NASA)*, Nov 2018, <https://climate.nasa.gov/solutions/adaptation-mitigation>.
- Nicholas, Kimberly A. and Wynes, Seth. “The Climate Mitigation Gap: Education and Government Recommendations Miss the Most Effective Individual Actions”. *Environmental Research Letters*, 12, 2017, <http://iopscience.iop.org/article/10.1088/1748-9326/aa7541/pdf>