

Writing section for U3 Writing Assignment

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My name is **Eriq Ahmad** and I was born and raised in Queens, New York. I am currently attending New York City College of Technology in my last semester here and will be transferring to Baruch College. My nationality is Guyanese. Although, creating this powerpoint for my U3 project made me feel both excited and helpful since I am trying to tell others what pollution can do, how it can affect our environment, and what solutions are best to avoid them. Talking about these different types of pollution made me realize that a change is needed and that others such as college students should be involved in this.

My question for my research is, "What are the different types of solutions for the different types of pollution? The reason why I chose this topic is because pollution is still going on right now, which made me wonder what are the solutions for it? I am interested because there could be a lot of great solutions that many do not know about which will be great to know. I am trying to inform mainly college students on what the solutions are for pollution.

Pollution can cause serious damage to our environment and ecosystems, which is good to know what solutions can be used to stop this from happening. It is an introduction of contaminants into the environment that causes adverse effects and it is unspecified whether or not those types of radiation have any effects on human health. This can definitely affect us if we don't solve this using the best and right solutions.

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I feel that **water pollution** is important to discuss because 80 percent of the world's wastewater is dumped back into the environment due to polluting rivers, lakes, and especially oceans. This big problem can threaten our health and can even kill us. Water quality is very important since it is what we use in our everyday lives. Preventing water pollution and conserving water assures an ongoing abundance of water that is safe to use for both ourselves and future generations. Also, this pollution causes bacteria and viruses from human and animal wastes, which can cause an illness if you drink the contaminated water.

Water pollution happens when harmful substances such as chemicals or microorganisms contaminate a stream, river, lake, ocean, or other body of water, degrading water quality and rendering it toxic to humans or the environment. Based on my research from Jelena Dragičević "Global Nitrate Water Pollution: Lessons from

Nebraska's Platte River Valley and beyond", I believe that nitrogen water is poisonous, which is bad for the water systems and that technology can definitely help stop this from spreading in the waters of Nebraska. Also, I agree that farmers using pesticides and fertilizer is a better solution to help prevent nitrate runoff because it will reduce the levels of nitrate from increasing so that it wouldn't get much worse. Quote from the text stated, "In the case of water pollution caused by agricultural practices, there is evidence to suggest that it is most effective to simultaneously clean up contaminated water and prevent chemical contamination in the first place".

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I feel that **land pollution** is important to discuss because it is the contamination of the Earth's land surface and it is a serious problem. From the results of human activities, land pollution results in an imbalance in nature that exposes the land to harmful chemicals and uses up the quality of soil, one of the Earth's most important natural resources. The harmful chemicals that can get into the soil and water can cause cancers, deformities, and skin problems. Also, land pollution can also cause the roots of plants and trees to rot away, creating an unstable environment and eliminating a primary food source for many inhabitants. It can run into water as well and kill animals drinking as well as the plants through root uptake.

Land pollution is a result of dumping garbage, waste, and other toxins making the land contaminated or polluted. The source of land pollution comes from the human element such as littering, and waste that is washed ashore from boats, oil rigs, and sewage outlets. Based on my research from Frank Joseph Pagone "Environmental Justice in Cook County, IL: Air and Land Pollution", the authors talk about both air and land pollution. Based on the text, I agree with what they've talked about with cancer risks because inhaling all the chemicals and garbage that are sitting everywhere in our environment can cause changes to our DNA, which can increase our chances of any disease, including cancer. Since I've already mentioned air pollution, the author mentioned land pollution (environmental pollution) and that there are communities who are in danger that have a high environmental pollution load with a lot of pollution on land surfaces.

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I feel that **air pollution** is very important to discuss because whenever we breathe polluted air into our lungs, it goes straight to our brain. This causes severe health problems such as cardiovascular diseases, asthma, and even cancer. This type of pollution is also a problem because it causes damage to crops, animals, forests, and bodies of water. It also contributes to the depletion of the ozone layer, which protects the Earth from the sun's UV rays. Some of the other environmental effects of air pollution are haze, eutrophication (when the environment becomes enriched with nutrients), and global climate change.

Air pollution is a mixture of solid particles and gases in the air. Car emissions, chemicals

from factories, dust, pollen and mold spores may be suspended as particles. Ozone, a gas, is a major part of air pollution in cities. When ozone forms air pollution, it's also called smog. Based on my research from Fan Si, Yuan Zhaokang, and Liao Xiong "A Study of Parents' Perception of Air Pollution and Its Effect on Their Children's Respiratory Health in Nanchang, China", the authors talked about how air pollution has a major effect on kids respiratory health in China. What they did was that they collected a lot of data and information from residents in China with respiratory conditions and the major cause of these conditions were very bad air quality which most children happened to have. What was interesting was that they found research on the bad air quality that was caused by construction dust, and vehicle exhaust emission, which caused "3.7 million premature deaths worldwide". Also, since China's economy is experiencing a rapid growth with more people including children, a lot of cities are experiencing this problem with increased pollutants. This caused many diseases for children such as asthma, allergies, bronchitis, coughing, etc.

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The **first** diagram on the left shows a visual on how pollution spreads during what seems to be a normal day. You can see what causes the water pollution is the oil and chemicals from the boat. Besides that, you can see construction, dirt, oil, etc causing other pollution that I haven't mentioned such as urban pollution, agricultural pollution, industrial pollution, and landfills pollution. This also is caused by pesticides from animal waste, chemicals from facilities, human activities, etc.

The **second** diagram on the right shows all of the different health effects of pollution, explaining what sicknesses and risks you may possibly get. One big problem you can get from both air and water pollution is a headache. This is caused from the elevated levels of chemicals that enter the body. Also, when consuming these pollution, it can most definitely cause nerve damage, cancer, nausea, etc. A solution I recommend to those to avoid this is wearing a mask, which can help your health and keep you safe.

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These are charts that get into further detail on countries that are in danger from pollution, certain percentages on what causes it, and the number of people who have been killed.

- 1.) For the **first chart**, you can see many countries that experienced pollution in their everyday lives. For ex: India is the #1 country for the most deaths caused by pollution with a total of 2.33 million people every year. Next is China, the #2 countries with a total of 1.87 million people. These two countries are stated to have the world's highest levels of deadly micro pollution due to their very high number of deaths from pollution. The rest of the countries have 300,000 people and less that died from pollution, which are not in danger compared to both India and China. We have 196,930 annual deaths which is good for us because we aren't in a bad place but we definitely can do better.

- 2.) The **second chart** shows the level of unhealthy air for sensitive groups in the U.S. from years 2000-2018. From 2000-2003, the level was over 2000 but then as you can see over the years it slowly started decreasing where by 2013-2018 it was between 500-700. This tells us that our air pollution decreased due to less bad air quality, renewable fuel and clean energy production.
- 3.) The **third chart** shows the different types of pollutants that enter the ocean. These pollutants are Sewage, Farm runoff, air pollutants, Marine transportation, Offshore oil, Industrial wastewater, and Litter. The most important pollutant that we should try and fix but can't really do so is Sewage. Sewage is the most pollutant because it is the waste water from the sewers which is always produced by people in our community and environment. This can cause toxic waste by contaminating water with disease and poisonous substances.
- 4.) The **fourth chart** shows countries that pollute the oceans the most. Besides all of the other countries, China is far more in danger with water pollution because they have 8.8 million metric tons of plastic wastes in global waters. This tells us that 90% of China's cities are already contaminated, due to their water supply that has been contaminated by the dumping of toxic waste. The other countries shown in the chart aren't even close to China's disasterly outcome.

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Here is a video of **Air pollution** which I personally find more dangerous compared to the other types of pollution.

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What I've found and learned in my research are some solutions and not all for the different types of pollution using different genres to get better results on what I'm looking for. What surprised me was the solution where pesticides and fertilizer can be used as a great solution for water pollution. This surprised me because I had no idea that this can prevent nitrogen runoff which is also important because nitrogen runoff has a lot of excess chemicals which can definitely harm both the water bodies and water quality. My understanding of my question changed me because at first I was thinking of basic solutions for these different types of pollution but then realized that there's more to it. Although, what I learned was important because it is very useful information on knowing what you need to do to prevent these types of pollution from spreading. Also, when knowing this, you can spread the word and let others know since most of them probably don't know anyways. Those who I specifically believe that should know about my research are those that throw garbage in our environment, waters, and spread bad air quality into our air. They're definitely the first to know about it since they're the ones that are still

spreading it all around the world.