

Name: _____ Class: _____

Water Scarcity: A Global Issue

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In areas where water is easily accessible, it's easy to forget that access to clean water can mean the difference between life and death. In this informational text, Shelby Ostergaard discusses the different factors that contribute to water scarcity in various regions throughout the world. As you read, take notes on the causes and effects of water scarcity.

- [1] Consider yourself lucky whenever you pour yourself a glass of water. Today, on every continent in the world, there are people who, because of water scarcity, spend their entire day looking for clean water.



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Water scarcity is pretty much what it sounds like — when water is so scarce in a region that the people there do not have enough clean water to drink. While the majority of people on earth have access to water, there are still millions of people who do not. According to reports the United Nations created as part of the Water for Life initiative and the non-profit *water.org*, one in ten people do not have access to clean water. Worldwide, that is roughly 783 million people. Imagine 783 million people who struggle daily for the clean drink of water that luckier people wake up to. There are two kinds of water scarcity. The first is physical water scarcity, which occurs in areas without natural water resources, such as deserts like the Sahara. The second is economic water scarcity, which occurs in areas where there are enough water resources for people to use, but they are poorly managed and allowed to be contaminated.

Physical water scarcity is most often caused by drought. A drought occurs when it rains far less in a given area than it usually does, creating shortages in water supply. Droughts can be declared after as little as 15 days without rainfall and can continue indefinitely. The longest drought in recorded history lasted for 400 years in the Atacama Desert in Chile. However, most modern droughts are not nearly so severe. In the United States, the National Drought Mitigation Center finds only the panhandle¹ of Oklahoma and northern Georgia experiencing 'extreme drought'. California experienced severe drought between 2012 to 2017, while Florida experienced severe drought between 2006-2007, and again in 2017. Droughts are considered severe when water shortages become common and extreme when major crop² loss occurs. Globally, the Center shows that there is 'extreme drought' in the Middle East and eastern Australia and 'severe drought' in parts of northern Africa.

1. a narrow strip of territory projecting from the main territory of a state
2. A crop is a type of plant that is grown for food, especially grain, vegetables, and fruit.

Droughts are a natural process that have occurred throughout history. The effects of prolonged drought often depend on both severity and how people react to them. Sometimes, like in California, drought can simply lead to a change of what is easily available for purchase in grocery stores. Others, like the 1900 drought in India, which had a death toll between 250,000 and 3.25 million, can lead to mass migration, famine,³ and humanitarian crisis.⁴ Droughts can start unexpectedly and last indefinitely. This unpredictability is a major factor in what turns droughts from unpleasant to deadly. Climate scientists are currently predicting that the same human activities which will lead to global climate change will trigger⁵ more droughts. The droughts triggered will be less natural and therefore even more unpredictable.

- [5] Economic water scarcity, on the other hand, is the result of plentiful water resources being mismanaged and leading to contamination and disease, sometimes as a result of war or conflict. In addition, water overuse and pollution are increasing global water insecurity. Contamination occurs whenever something is mixed into a water supply; if it is harmful to humans, animals, or plants, it is then referred to as pollution. Pollution can be as simple as a dead animal dumped into the river that supplies a village, or as complex as large multinational corporations building factories that pollute water sources. It can include oil, carcasses, chemicals, and fecal matter. When any one of those is dumped into a main water supply, it contaminates the entire supply, rendering it undrinkable.

Economic water scarcity occurs all over the world. In Linfen, China, residents say that they choke on coal dust daily and cannot drink the water because of the coal mixed into it. In Ranipet, India, leather tanning wastes contaminate groundwater⁶ with the chemical hexavalent chromium, leading to water that residents say stings like an insect. This is the same chemical whose presence in a California's water supply triggered a massive lawsuit against Pacific Gas and Electric Company, as depicted in the 2000 film *Erin Brockovich*. Worldwide, water is not always contaminated as a result of corporate pollution. In Mexico City, after a 1985 earthquake damaged the pipes and tunnels the city had built for water, the government could not manage to repair the damage. Now, over 30 years later, the city still does not have access to clean drinking water. Drinking the water in any of these places, including parts of the USA, will lead to health problems.

The consequences of waterborne diseases are deadly. They can lead to bacterial infections, typhoid fever, cholera, skin trauma and even brain damage.

Finally, world conflicts drive water insecurity. When a region is embroiled⁷ in a conflict or war, it becomes much more difficult for the people in that region to access water. Sometimes it is simply because there is too much violence. In conflict zones, like in Afghanistan or South Sudan, even walking to a well can become deadly, not to mention what happens when the water is further away than across the village. Some governments, especially dictatorships, restrict access to water to exert⁸ control over the people they govern. Additionally, modern weapons often have a side effect of polluting water. Dzerzhinsk, Russia has a contaminated water supply because it was the country's primary chemical weapons manufacturing site throughout the Cold War. Chernobyl, Ukraine, the infamous site of a nuclear meltdown, still has contaminated water because of that meltdown.

3. extreme shortage of food

4. a singular event or a series of events that threatens the health, safety, or well-being of a community of people

5. **Trigger (verb):** to cause (an event or situation) to happen or exist

6. water that collects or flows beneath the Earth's surface

7. **Embroid (verb):** to involve something or someone in conflict or difficulties

8. **Exert (verb):** to apply or bring to bear

Water is life. That's not an exaggeration or a metaphor. Large swaths of people die from waterborne diseases, or from dehydration, as a direct consequence of water scarcity. A human body is largely made of water, and daily water intake is absolutely necessary to replenish that. Water is more important for survival than food, and global access to water is a fundamental human issue. It is the first thing that humans need. As water scarcity increases globally, we are all in danger. Without water, without that first thing, life slowly starts to shut down.

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Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which of the following best describes the author’s main claim in the text? [RI.2]
 - A. Water scarcity is not something that humans have any control over, as it is caused by natural events.
 - B. Humans can reverse the damage they have inflicted on the Earth’s water supplies if they reduce their pollution output.
 - C. Widespread water scarcity threatens the right that all humans should have to access clean drinking water, as it is essential to live.
 - D. Water scarcity is an issue primarily caused by humans that needs to be addressed by humans.

2. PART B: Which detail from the text best describes the answer to Part A? [RI.1]
 - A. “Droughts are a natural process that have occurred throughout history. The effects of prolonged drought often depend on both severity and how people react to them.” (Paragraph 4)
 - B. “In Ranipet, India, leather tanning wastes contaminate groundwater with the chemical hexavalent chromium, leading to water that residents say stings like an insect.” (Paragraph 6)
 - C. “Chernobyl, Ukraine, the infamous site of a nuclear meltdown, still has contaminated water because of that meltdown.” (Paragraph 8)
 - D. “Water is more important for survival than food, and global access to water is a fundamental human issue.” (Paragraph 9)

3. How does physical water scarcity compare to economic water scarcity? [RI.3]
 - A. Physical water scarcity is caused when there is naturally a lack of water in an area, while economic water scarcity is caused when humans alter a once useable water source.
 - B. Physical water scarcity is caused solely by droughts, while economic water scarcity is caused by humans’ contamination of water.
 - C. Physical water scarcity is caused by a natural lack of water in an area, while economic water scarcity is caused by a region’s inability to afford water.
 - D. Physical water scarcity is caused by humans’ contamination of a water source, while economic water scarcity is caused by the lack of natural water sources in an area.

4. How does the introductory quote “Consider yourself lucky whenever you pour yourself a glass of water” (Paragraph 1) contribute to the text? [RI.5]
 - A. It persuades readers to feel guilty about their access to water.
 - B. It shows that most people take their drinking water for granted.
 - C. It hints at a future in which people may not have access to drinking water.
 - D. It encourages readers to reflect on their own access to water.

5. What evidence does the author use to support the idea that contaminated water can [RI.8] negatively impact people's health?
