

Name _____

Can Too Much Carbon Dioxide in the Air Be Harmful?

Open-Ended Response Answer Key

1. The natural greenhouse effect is a process by which certain gases in the Earth's atmosphere, including carbon dioxide and water vapor, trap heat from the sun, keeping the planet at a habitable temperature. The enhanced greenhouse effect occurs when human activities, such as burning fossil fuels, increase the concentration of these gases, leading to an intensified heat-trapping effect. Consequences include global warming, rising temperatures, melting ice caps, and changes in weather patterns.
2. Ocean acidification can have devastating effects on marine ecosystems, leading to the decline of coral reefs, shellfish, and other marine life. This can disrupt the marine food chain and impact fish populations, which many human societies rely on for seafood and livelihoods. Additionally, ocean acidification may affect coastal communities and economies that depend on fisheries.
3. As an environmental advocate, I would recommend individuals reduce their carbon footprint by conserving energy, using public transportation, and supporting renewable energy sources. Communities should promote sustainable practices, such as waste reduction and green transportation. Governments should enact policies to limit carbon emissions, invest in clean energy infrastructure, and engage in international cooperation to address climate change.
4. International cooperation is crucial in addressing excess carbon dioxide because climate change is a global challenge. Agreements like the Paris Agreement bring countries together to set targets for reducing carbon emissions and limiting global warming. The Kyoto Protocol was an earlier agreement with similar goals. These agreements aim to prevent dangerous climate change and protect the planet for future generations by fostering collaboration among nations.

