

All About The Greenhouse Effect



Earth's Invisible Blanket

Imagine Earth wearing an invisible blanket made of gases. This blanket is called the **greenhouse effect**, and it helps keep our planet warm enough for life. Without it, Earth would be a frozen, lifeless ball drifting through space. The Sun sends energy to Earth as light, which warms the land, oceans, and air. Then Earth releases some of that energy back into space as heat, also known as **infrared radiation**.

Here's where the greenhouse effect plays its role. Certain gases in the atmosphere, like **carbon dioxide, methane, and water vapor**, trap some of that heat so it doesn't escape into space too quickly. This natural process is like closing the windows to keep warmth inside your home on a cold night.

However, humans are changing the balance. Burning **fossil fuels** such as coal, oil, and natural gas adds extra greenhouse gases to the atmosphere. More gases mean more heat gets trapped. This leads to **global warming**, a rise in Earth's average temperature. Global warming can melt glaciers, raise sea levels, and change weather patterns, affecting people, animals, and ecosystems around the world. The greenhouse effect itself is not bad, it's necessary for life. But too much of it can tip the balance and cause serious problems for our planet's climate.

1. What is the greenhouse effect often compared to in the passage?
2. What type of radiation does Earth release back into space after absorbing sunlight?
3. Name two greenhouse gases mentioned in the passage.
4. What human activity adds extra greenhouse gases into the atmosphere?
5. What is one possible effect of global warming mentioned in the passage?
6. Why is the greenhouse effect described as both helpful and harmful?
7. Imagine Earth without the greenhouse effect. What would it be like?
8. Based on the passage, how does the greenhouse effect act like closing windows in a home?