

Meet the Greenhouse Gases!



Greenhouse gases are gases that can trap heat. They get their name from greenhouses. A greenhouse is full of windows that let in sunlight. That sunlight creates warmth. The big trick of a greenhouse is that it doesn't let that warmth escape.

That's exactly how greenhouse gases act. They let sunlight pass through the atmosphere, but they prevent the heat that the sunlight brings from leaving the atmosphere. Overall, greenhouse gases are a good thing. Without them, our planet would be too cold, and life as we know it would not exist. But there can be too much of a good thing. Scientists are worried that human activities are adding too much of these gases to the atmosphere.

So, what are these gases all about?



METHANE



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Methane, made of carbon and hydrogen, is a normal gas released from wetlands, growing rice, raising cattle, using natural gas, and mining coal.



OZONE



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Up in the atmosphere where the planes fly, the ozone layer blocks the sun's radiation, which helps protect us from the powerful rays.



METHANE



It traps a lot of heat. Scientists consider it the second most important contributor to human-caused global warming of all the greenhouse gases.



OZONE



Close to the ground, ozone acts as a greenhouse gas and can be formed by burning gas in cars and factories.





NITROUS OXIDE



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N₂O

Nitrous oxide is a natural part of the nitrogen cycle. Bacteria in soil and the ocean make it.



CHLOROFLUOROCARBONS



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CFCs

Fluorinated gases are not created in nature. They damage the protective ozone layer and are powerful greenhouse gases.



NITROUS OXIDE



N₂O

Nitrous oxide is released by some types of factories, power plants, and plant fertilizer. It damages the protective ozone layer and is a powerful greenhouse gas.



CHLOROFLUOROCARBONS



CFCs

You probably shouldn't have created me.



National Aeronautics and
Space Administration



WATER VAPOR



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H₂O

This is water in gas form, like steam above a boiling pot or water evaporating off a lake. It forms clouds and rains back on Earth. This can cause a cooling effect.



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Space Administration



CARBON DIOXIDE



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CO₂

Made up of carbon and oxygen, CO₂ is all around us naturally. It comes from decaying and living organisms, and from volcanoes.



WATER VAPOR



H₂O

Water vapor blocks heat from escaping, so it gets warmer. That makes even more water evaporate. Once this process happens, it can happen again more easily.



CARBON DIOXIDE



CO₂

CO₂ is released when burning fossil fuels like coal and oil. It's the most important contributor to human-caused global warming.

