Greenhouse Effect Submission

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Grade Level: 10

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# Claim

I believe that the amount of greenhouse gases in the atmosphere directly affects Earth’s climate. The more greenhouse gases there are, the warmer the planet gets.

# Evidence, Part 1: PhET Simulation

In the PhET simulation, I observed that when there were more greenhouse gases in the atmosphere, the temperature increased. The infrared radiation bounced around more instead of escaping into space. This made the Earth warmer.

# Evidence, Part 2: Physical Lab or Virtual Observation

In my experiment, I used two jars with thermometers—one with extra carbon dioxide and one without. After sitting under a lamp for a few minutes, the jar with CO2 was warmer. This showed me that more greenhouse gases trap more heat.

# Evidence, Part 3: Additional Scientific Source

According to the NASA article 'The Atmosphere: Earth’s Security Blanket,' greenhouse gases trap heat in the atmosphere and keep Earth warm enough for life. But if there are too many, it causes global warming. This supports my claim that greenhouse gases affect the climate.

# Reasoning

All the evidence I found supports my claim. The simulation showed how greenhouse gases trap heat. My experiment confirmed that more CO2 leads to higher temperatures. And the NASA article explained how this works in real life. So, I can say that the amount of greenhouse gases in the atmosphere does impact Earth’s climate. If we keep adding more, it could lead to dangerous changes like more heatwaves and rising sea levels.