

**Avatar: The Greenhouse Effect**

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The final important feature of Earth's atmosphere is its moderate greenhouse effect. A greenhouse effect is the heating of the planet due to atmospheric gases that absorb radiation. On Earth, these gases are primarily carbon dioxide and methane. They trap heat and keep the planet from getting too cold. You can see in the diagram that some solar radiation is reflected back to space, but some of it is absorbed by the greenhouse gases in the atmosphere. In the absence of any greenhouse effect, Earth would be much too cold to sustain life. However, excessive amounts of carbon dioxide and methane in the atmosphere can result in an enhanced greenhouse effect, making the planet too warm. Human activities, such as burning fossil fuels, forest fires, deforestation, and agriculture, contribute elevated levels of carbon dioxide and methane to the atmosphere. These activities and the resulting gases need to be kept at moderate levels. But at this point in human history, we may be contributing too many greenhouse gases to the atmosphere and creating the phenomenon called global warming.