

Climate Change

Our atmosphere keeps the Earth's temperature stable. It lets just the right amount of sunlight through, so the Earth doesn't get too hot in the summer. It also it keeps warmth from escaping so we don't get too cold in the winter. In this way the atmosphere acts like a greenhouse. This is called the "greenhouse effect." It is part of what makes our planet the comfortable place that it is.

Lately though, scientists have been worried that too many "greenhouse gases" are building up in our atmosphere. More humans are driving more cars and heating more homes than ever before. We do this mostly by burning fossil fuels (oil and gasoline) and coal. This releases greenhouse gases, like carbon dioxide, into the atmosphere. At the same time we are cutting down trees in record numbers. Trees, as we have learned, help take up carbon dioxide in the atmosphere and replace it with the oxygen we need. Scientists worry that if we have so many less trees AND make that much more carbon dioxide, we will begin to build up greenhouse gases faster than ever before. This might block even more heat from escaping into space and like a greenhouse with its windows shut on a hot, sunny day, it might be getting a bit warmer in here. This warming effect is called "global warming."

The rise in Earth's temperatures might be small, just a few degrees, but over time it could have a big effect. Scientists worry that it will eventually cause the polar ice caps to melt and the sea levels to rise. This could change weather patterns and alter habitats in a way that might result in many animals going extinct. It's still early to know all the effects of global warming on our planet, but it's important to know how our actions can make a difference.

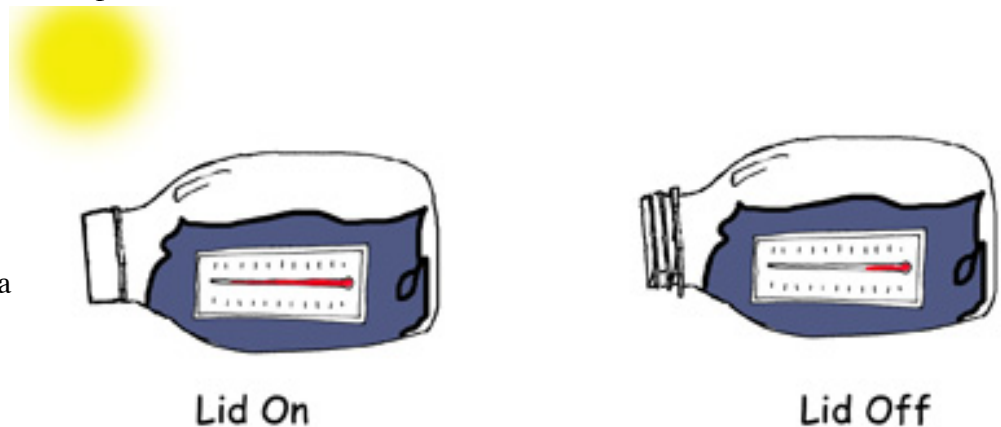
Global Warming Experiment – Is it Getting Hot in Here?

How would the greenhouse effect warm up the Earth's climate?

Try this experiment to see.

Supplies: You will need:

1. two jars
2. two thermometers
3. two dark washcloths
4. paper and pencil to record data
5. one lid
6. a sunny window



Procedures:

1. Put a dark washcloth inside each jar. Lay the jars on their side in the sunny window.
2. Lay one thermometer inside each jar facing up so you can read it.
3. Put a lid on one jar. Leave the other one open.
4. Watch the thermometers closely for 20 minutes. Check the temperatures every 2 minutes.
5. Record the time and temperatures.
6. After 20 minutes open the jars and remove the thermometers.
7. What difference did you notice in the temperatures between the two jars?

Explain what you see. How does the lid on the closed jar represent the Earth's Atmosphere?