

Global Climate Change: Understanding the Greenhouse Effect

PART B: The Greenhouse Gases

Name: _____ EN _

Lab setup:

- place three thermometers within a few inches of each other on a sunny windowsill or under a sun lamp.
- Be sure that all three thermometers receive the same amount of light for the entire class period.
- periodically check the thermometers until they are at exactly the same temperature
- record this temperature and the time.
- cover two thermometers with glass jars, leaving one thermometer uncovered.
- place a wet paper towel inside one of the two jars Use water at room temperature to wet the paper towel
- periodically check all three thermometers and record the temperature and time.

Show students the video [Global Warming: The Physics of the Greenhouse Effect](#)

1. What is the greenhouse effect?
2. What are four naturally occurring greenhouse gases?
3. What would Earth be like without the greenhouse effect?
4. What are some manmade sources of greenhouse gases other than power plants and automobiles?
5. What natural phenomena produce greenhouse gases?

Lab continued

- take temperature readings of the thermometers inside the jars and compare them to the temperature of the thermometer outside the jars.

Show the video [Global Warming: Carbon Dioxide and the Greenhouse Effect](#)

6. Why does the image of the scientist fade after carbon dioxide has been turned on? How does this explain the greenhouse effect?
7. What would the scientist feel like if he were inside the tube? How does this explain the effect of carbon dioxide on the temperature of the atmosphere?

