

Greenhouse Effect and Global Warming Worksheet

Data Tables

Part I. Greenhouse Effect

All temperatures in degrees C

Time (min)	Open	Clear Bottle	Bottle with Construction Paper
0			
5			
10			
15			
20			

Part II. Sources and Levels of Greenhouse Gas

Source of CO ₂	Initial Solution Color	Color after Adding Gas	Number of Drops of NaOH Required
Breath			
Automobile Exhaust			
CO ₂			

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Post-Lab Questions

- 1. Compare and contrast the temperature results obtained for the different thermometer setups in Part I.
- 2. Define the greenhouse effect and global warming. Describe how they are related.
- 3. How do the temperature results observed for the different bottles in Part I relate to the greenhouse effect?
- 4. What additional experiments could be performed using the basic setup in Part I to further investigate the greenhouse effect?
- 5. Which indicator sample(s) in Part II revealed the presence of carbonic acid after the balloon gases were bubbled through them?
- 6. Compare the number of drops of NaOH required to return to the original control color for each solution. What do these results mean?
- 7. Which balloon sample contained the largest amount of CO₂? Which contained the least?
- 8. Describe possible sources of experimental error that may affect the results for Part II.
- 9. Name a few ways to decrease the amount of greenhouse gas that is released into the atmosphere.