

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Greenhouse Gasses Virtual Lab Part 1

### Part 1: Molecules and Light

1. Click on [this link](#) to go to the [PhET Greenhouse Effect simulation](#). Click on the tab at the top that says **Photon Absorption**.
2. Look at each molecule and draw or screenshot its shape.
3. Then use the slider on the flashlight on the left to add the different types of radiation
4. Describe how the gas behaves: Does it move? Wiggle? Stay still?
5. Describe how the photons behave? Do they pass through or bounce off of the gas?

Molecule	Draw the shape or take Screenshot	Behavior in <u>Infrared</u> (Infrared Photon)	Behavior in <u>Visible Light</u> (Visible Photon)
Methane (CH <sub>4</sub> )			
Carbon Dioxide (CO <sub>2</sub> )			
Water (H <sub>2</sub> O)			
Nitrogen (N <sub>2</sub> )			
Oxygen (O <sub>2</sub> )			

6. What is the relationship between a molecule's shape and its behavior in infrared radiation?

7. What is the relationship between a molecule's shape and its behavior in visible light?

8. Greenhouse gasses are gasses that absorb and re-emit, or block, infrared radiation. Which of the gasses from the table would you expect to be greenhouse gasses? Why?