**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Global Warming PHET Simulation**

Directions:

1. Google PHET simulations.
2. Click on the University of Colorado PHET simulations site.
3. Click on Earth Science and find the Greenhouse Effect simulation.
4. Click RUN NOW. Follow the directions on the computer and answer the following questions.

Questions:

1. What do the yellow dots represent?
2. What direction do the yellow dots come from?
3. What do the red dots represent?
4. What direction do they travel? What happens to them?
5. On the right side of the screen:
   1. Click on Present Day. What does the “Thermometer” on the left side of the screen read?
   2. Click on 1750. What does the “Thermometer” on the left side of the screen read?
   3. Click on Ice Age. What does the “Thermometer” on the left side of the screen read?
6. Greenhouse gas concentrations. Write down the concentrations of the GHG’s.

|  |  |  |  |
| --- | --- | --- | --- |
| Greenhouse gas | Today | 1750 | Ice Age |
| H20 (rel. humidity) |  |  |  |
| CO2 |  |  |  |
| CH4 |  |  |  |
| N2O |  |  |  |

1. How does relative humidity change from the Ice Age to the present?
2. How does CO2 change from the Ice Age to the present?
3. How does CH4 change from the Ice Age to the present?
4. How does N2O change from the Ice age to the present?
5. What happens to the Temperature when you increase the number of clouds in atmosphere?
6. On the right side of the screen increase the concentration of greenhouse gases to the maximum level. What is the highest temperature reading?
7. Decrease the greenhouse gas concentration to the lowest setting. What is the lowest temperature reading?
8. How does the amount of sunlight striking the surface of the Earth change with GHG concentration.