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

**Climate Change**

**Directions:** Use the NASA global climate change website, <http://climate.nasa.gov/>, as your source to answer the following questions. The website is also linked to Blackboard.

**Evidence of Climate Change**

* Global temperature increase since 1880 is \_\_\_\_\_\_\_\_\_⁰F, and nine of the 10 warmest years have occurred since \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Carbon dioxide parts per million in the atmosphere is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Sea level is rising \_\_\_\_\_\_\_\_\_\_mm per year, and rose \_\_\_\_\_\_\_\_\_\_ inches in the past 100 years.
* \_\_\_\_\_\_\_\_\_\_\_\_\_ billion metric tons of land ice is lost per year from Greenland’s ice shelf. Greenland’s ice loss doubled between \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_.
* Arctic Ocean ice cover is decreasing \_\_\_\_\_\_\_\_\_\_\_ percent each decade.
* Acidity of surface ocean waters has increased by \_\_\_\_\_\_\_\_ percent since the Industrial Revolution.

**Causes of Climate Change**

1. Explain the Greenhouse Effect.
2. List gases that contribute to the greenhouse effect.
3. List several processes and activities that cause carbon dioxide to be released into the atmosphere.
4. What is the Intergovernmental Panel on Climate Change, and what did they conclude regarding the increase in temperature over the past 50 years?

**Effects of Climate Change**

Pick two regions in the United States and list impacts of climate change to that region. In addition, pick one of the impacts of each of the two regions you selected, and give details on how you think that effect of climate change will affect the region. (For example, in the Southwest it lists that heat and drought have increased wildfires. Give details on how wildfires might affect the Southwest.)

**Frequently Asked Questions**

1. Explain the difference between Global Warming and Global Climate Change
2. What evidence do we have that supports the statement that the sun is not causing global warming?
3. Read the answer to “Is it too late to prevent climate change?” and write a sentence or two on your thoughts/reaction to the answer.
4. Explain why NASA is involved in climate change research.
5. How do scientists have data on what the greenhouse gas and temperature levels were hundreds of thousands of years ago?
6. What would happen to the length of a day on Earth if all of the ice on Earth melted?