Name(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How Has Temperature Varied Regionally Since the Industrial Revolution?**

**Exploration 4: A Comparison of Polar and Tropical Regions**

In the previous explorations, you used an interactive graphing tool to see how temperature varies in different regions. In this exploration, you will view a video of a visualization and compare polar regions to tropical regions.

This visualization was developed by NASA’s Goddard Institute and shows color-coded maps displaying a progression of changing global surface temperature anomalies from 1880 through 2011. The blue color indicates areas that are 1-2°C cooler than the average global temperature anomaly and the red color indicates areas that are 1-2°C warmer than the average global temperature anomaly. No color (white) indicates that temperatures are normal.

Click on the link below to view the visualization and answer the following questions. (Hint: you may need to play the video several times): [http://www.nasa.gov/topics/earth/features/2011-temps.html](https://exchange.fau.edu/owa/redir.aspx?C=WzdecXMsDUSxd0HlKy4BJPNsTETUMNAIfsAyqPMANM0pnFfiw9yVdMt2EIDwYrX6zAlrRXW7_MY.&URL=http%3a%2f%2fwww.nasa.gov%2ftopics%2fearth%2ffeatures%2f2011-temps.html)

1.      On a global perspective, what do you observe about the change in temperatures over the 131 year period? Explain your reasoning.

2.      Throughout the visualization, what regions start to show the warmest temperature anomalies (2°C indicated by the darker red color)?

3.      Look at the tropical regions in and around the equator. What do you notice about the temperature change? Explain your reasoning.