

Matt Brueseke  
Department of Geology  
108 Thompson Hall  
Kansas State University  
Manhattan, KS 66502

### **Weather Map Assignment**

(I gave this as a homework assignment for ESC 1400, Weather and Climate which I taught at Eastern Illinois University during the Fall 2006 semester)

## Weather Map Assignment (70 pts.)

Your job is to pick a location in the United States, record weather statistics at the location for a week, and examine how climatic factors produce changes in the weather.

- 1) Begin by picking a location in the continental United States that starts with the first letter of your last name. For example, since my last name starts with a "B", I could choose, Boise, ID (Charleston, IL and Chicago, IL are not allowed). If, for some reason, I intensely dislike the city of Boise, I might pick Barstow, CA or Bend, OR instead. Get wild and crazy and pick a spot outside of Illinois!!
- 2) Go to [www.weather.com](http://www.weather.com) and make sure that the location you have chosen is listed. You will need to pick a location that is large enough to have its own statistics listed. Some locations might be too small to have a corresponding set of climatic data; if you type in a location and the website lists the necessary data, it's an appropriate location to use for this assignment.
- 3) Make sure that all of the data you need to collect for this assignment is provided on the website depicting the "weather" for your chosen location. If one of the following is missing, pick a new location. Here's what you need to record:
  - Temperature
  - Relative humidity
  - Air pressure in millibars or inches of Hg (either is OK to use, just be consistent)
  - Barometric tendency (is the air pressure rising, falling, remaining constant, etc.?)
  - Wind direction and wind speed
- 4) For **seven consecutive** days at approximately the same time of day. You will record these data for the location you chose. Each time you record this data you are also required to go to the national weather map (the "U.S. Current Weather" map on [www.weather.com](http://www.weather.com)) and draw in the High and Low Pressure regions as well as all the fronts (cold, warm, stationary, occluded) using appropriate colors and symbols on the maps provided. You should also plot the location you have chosen on each map.
- 5) At the end of the seven days, review the data you have recorded and the maps you have created. Write a one to two-page (11 point font, double-spaced) description of your data and maps. In this essay, address the following: Over the week what changes occurred in the weather statistics and how did these changes relate to the movement of High/Low pressure regions and fronts? You do not need to give me a day-to-day account. Instead, broadly examine the changes and the reasons why. For example, if you record a 17 degree drop in temperature over the course of two days that was accompanied by falling air pressure, you need to explain why this occurred; was it related to a cold front, a warm front, or something else? Basically, use the data you have collected, your maps, and your budding meteorological savvy to guide your interpretation.

→This assignment will be **due at the beginning of class on Thursday, November 16**. You will turn in [1] your maps, [2] the recorded data, and [3] your essay, all stapled together. Late assignments will be accepted, but with a penalty of 10 points per day. Your grade will be based on accuracy, neatness of your maps, and the quality of your analysis (your essay).

Date/Time: \_\_\_\_\_



Temperature (°F & °C): \_\_\_\_\_

Relative Humidity: \_\_\_\_\_

Air Pressure: \_\_\_\_\_

Barometric Tendency: \_\_\_\_\_

Wind Origin: \_\_\_\_\_

Wind Speed: \_\_\_\_\_

Other notes:

Date/Time: \_\_\_\_\_



Temperature (°F & °C): \_\_\_\_\_

Relative Humidity: \_\_\_\_\_

Air Pressure: \_\_\_\_\_

Barometric Tendency: \_\_\_\_\_

Wind Origin: \_\_\_\_\_

Wind Speed: \_\_\_\_\_

Other notes: