

Name: \_\_\_\_\_

**BLIZZARD OF '93 WORKSHEET**

Section: 10-\_\_\_\_

DUE DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

A major winter storm dubbed “The Blizzard of ‘93” brought the Eastern United States to a standstill. Heavy snowfall blanketed the region from Mississippi to Maine along the Appalachians. Virtually all transportation came to a halt. Electric power was lost in tens of thousands of homes and businesses. The death toll, directly and indirectly related to the storm, was estimated to be over 270. Major snowstorms are generally associated with winter storm systems that move across the country.

**Objectives:** Upon completing this activity you should be able to analyze the areas of heavy snowfall and track the low–pressure center of a storm.

**Procedure:**

1. The accompanying map shows the total snow that fell during the storm. On the map **draw and label** the isoline connecting places where the total snowfall was probably 10 inches. Where a 10 is not shown, interpolate between values provided to locate the line. Next draw and label the lines for 20 and 30 inches of snow. There are two 20 inch lines.
2. Observe the three isolines which you have just drawn with a contour interval of 10 inches and note where the heaviest snowfalls occurred. Note the amount of change in the snowfall between isolines that are very close together. **Label** the location of the Gulf Stream (see ESRT) and **draw arrows** indicating its direction of flow.
3. Data Table #1 lists the locations of the center of the storm system as it tracked up the east coast. On the map of snowfall totals, **plot** the center of the storm by **placing an “L” with the date and time value** for each position within the period from March 12 at 7 p.m. EST to March 14 at 7 a.m. EST. (Eastern Standard Time). Draw arrows indicating the track or direction of the low pressure system. (example: 3/12 - 7 PM)

**DATA TABLE #1: Storm Center of Lowest Recorded Pressure at Various Days and Times**

| <i>Date</i> | <i>Time</i> | <i>Latitude</i> | <i>Longitude</i> | <i>Pressure</i> | <i>Remarks</i>                   |
|-------------|-------------|-----------------|------------------|-----------------|----------------------------------|
| 3/12        | 7 pm        | 28.2 N          | 89.0 W           | 989 mb          | SSE of New Orleans, LA           |
| 3/12        | 11 pm       | 30.0 N          | 86.2 W           | 983 mb          | SW of Pensacola, FL              |
| 3/13        | 7 am        | 32.0 N          | 83.0 W           | 973 mb          | 30 mi. NW of Alma, GA            |
| 3/13        | 1 pm        | 35.5 N          | 78.5 W           | 966 mb          | 30 mi. SE of Raleigh/Durham, NC  |
| 3/13        | 7 pm        | 38.7 N          | 75.8 W           | 960 mb          | 30 mi. SW of Dover, DE           |
| 3/13        | 11 pm       | 40.9 N          | 74.3 W           | 962 mb          | 20 mi. SE of LaGuardia, NY       |
| 3/14        | 7 am        | 45.0 N          | 68.1 W           | 965 mb          | NE of Bangor, ME, center diffuse |

**Conclusions:**

1. What relationship do you note between the track (direction) of the cyclone center (low) and the heaviest snowfall? Why would you expect this relationship to occur? Include all of the necessary conditions for snowfall to occur: latitude, altitude, pressure, wind direction and moisture. Answer in at least five (5) complete sentences. (25 points)

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