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Conceptual Physics: _____
Date: _____

Unit XI
Meteorology
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XI

Creating an Isothermal Map

Objective: *Create a map using different colors to show the temperature regions.*

Directions

- Using different colors set up a temperature color code. Indicate that color code in the space below.

0 - 9	_____	50 - 59	_____
10 - 19	_____	60 - 69	_____
20 - 29	_____	70 - 79	_____
30 - 39	_____	80 - 89	_____
40 - 49	_____	90 - 99	_____

- Begin at the top or the bottom of the map. These areas should indicate the extremes in temperature. The top being the low temperatures and the bottom being the high temperatures.
- Start on the left side of the map and draw a line that separates the highest temperatures from the next group. Notice that each group of temperatures represents 10 degrees. So, on this example, the highest temperatures are in the 80s. Draw a line that separates all of the 80s from all of the other temperatures.
- Next, draw a line that separates all of the 70s from the previous line and from all other temperatures. You may have to do a little finagling to get all of the 70s included in this area.
- Make sure no abrupt changes occur. A region of 30 degree temperatures should not border a region of 50 degree temperatures. There should be a thin separation of 40 degree temperatures between them.
- Color each of the degrees gradients with a different color. Meteorologists use such maps to identify any patterns in temperature change such as cold and warm fronts. When your map is completed examine it to see any patterns.

Conclusion

How Thermometers Work:

A thermometer contains mercury or alcohol. When the mercury or alcohol warms up the mercury or alcohol expands. (The atoms or molecules move further apart.) The mercury or alcohol in the bulb expands into the thin glass tube and the change can be measured.

