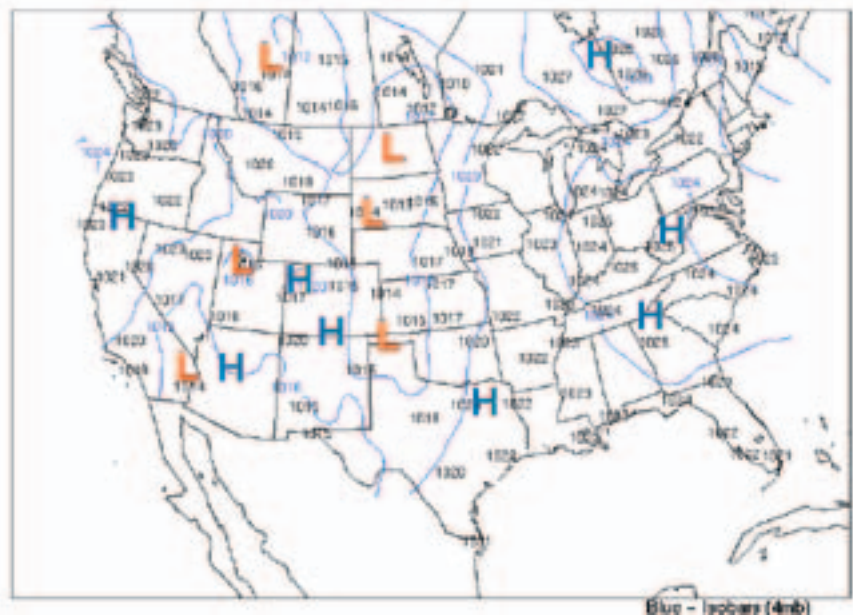




INVESTIGATING CLIMATE AND WEATHER

- d) What is the general relationship between air pressure (high or low) and the type of weather (storms, sunny, etc.) in a region?
- e) In a rapidly ascending elevator or an airplane taking off, you may feel a popping sensation in your ears. What do you suppose causes this, and how might it be related to the drop of air pressure with increasing altitude?



As You Read...

Think about:

1. Who drew the first weather map, and how was the information obtained?
2. What is an isotherm?
What is an isobar?
3. Why does air pressure always decrease upward in the atmosphere?
4. Why is the weather in high-pressure areas usually fair? Why is the weather in low-pressure areas usually cloudy and stormy?
5. What is the difference between a cold front and a warm front?

Digging Deeper

WEATHER MAPS

A weather map is a graphical model of the state of the atmosphere over a broad region at a specific time. Meteorologists call these synoptic maps (*syn-* means at the same time, and *-optic* stands for seeing). In the late 1700s, Benjamin Franklin drew the first synoptic weather map. He asked a number of friends living in eastern North America to record the weather each day for several days and then mail their journals to him. He then drew weather maps for each day. The mails were very