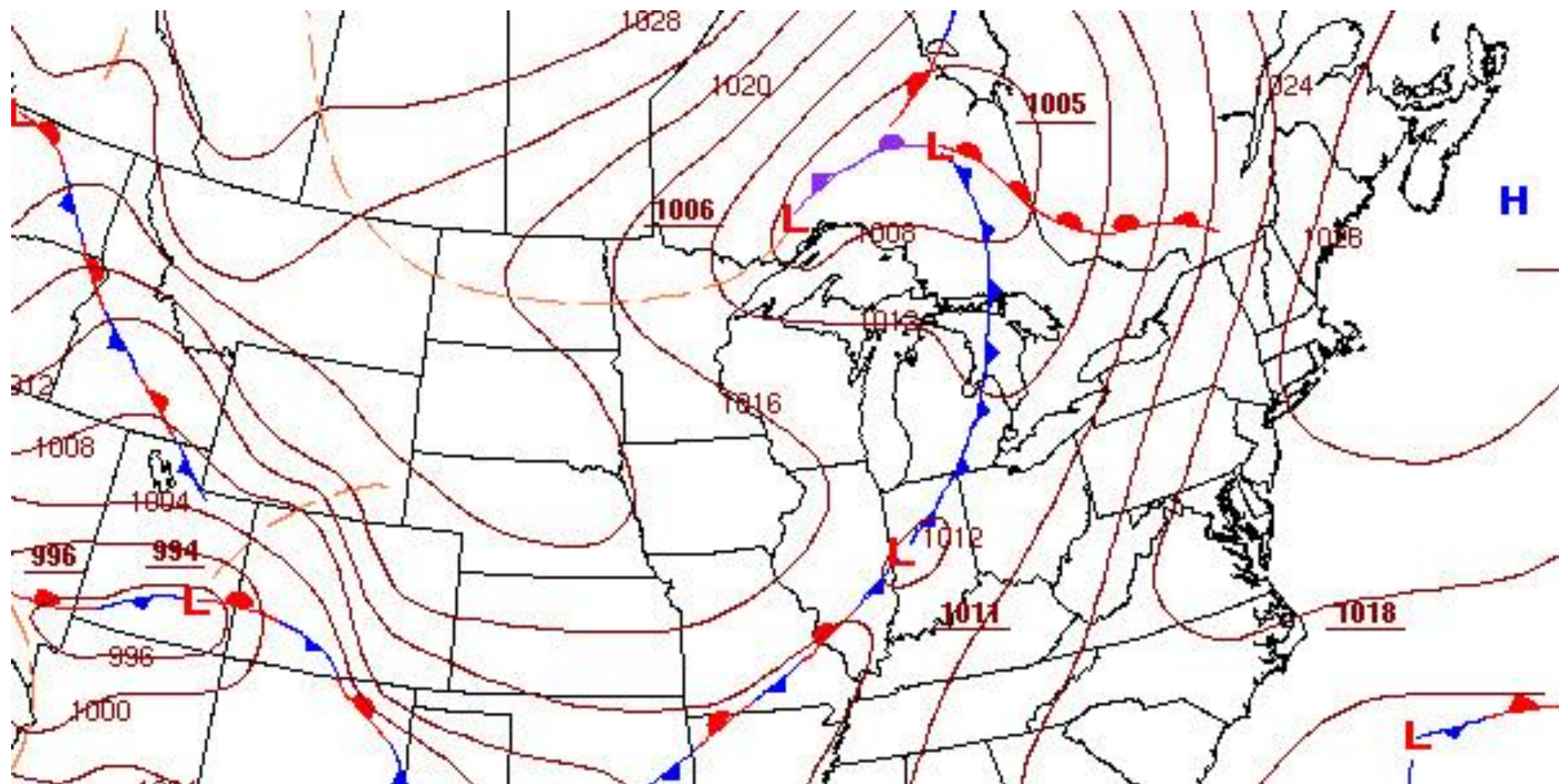


Low Pressure Centers and High Pressure Centers

Source: Weatherworksinc.com



- Chances are you've heard the following from your local TV meteorologist:

“plenty of sunshine is in store today as high pressure is in control over the area.”

OR

“expect rain to spread into the area as a low pressure system approaches.”

High pressure is usually associated with nice weather, while low pressure is usually associated with cloudy, rainy, or snowy weather.

But have you ever wondered why?

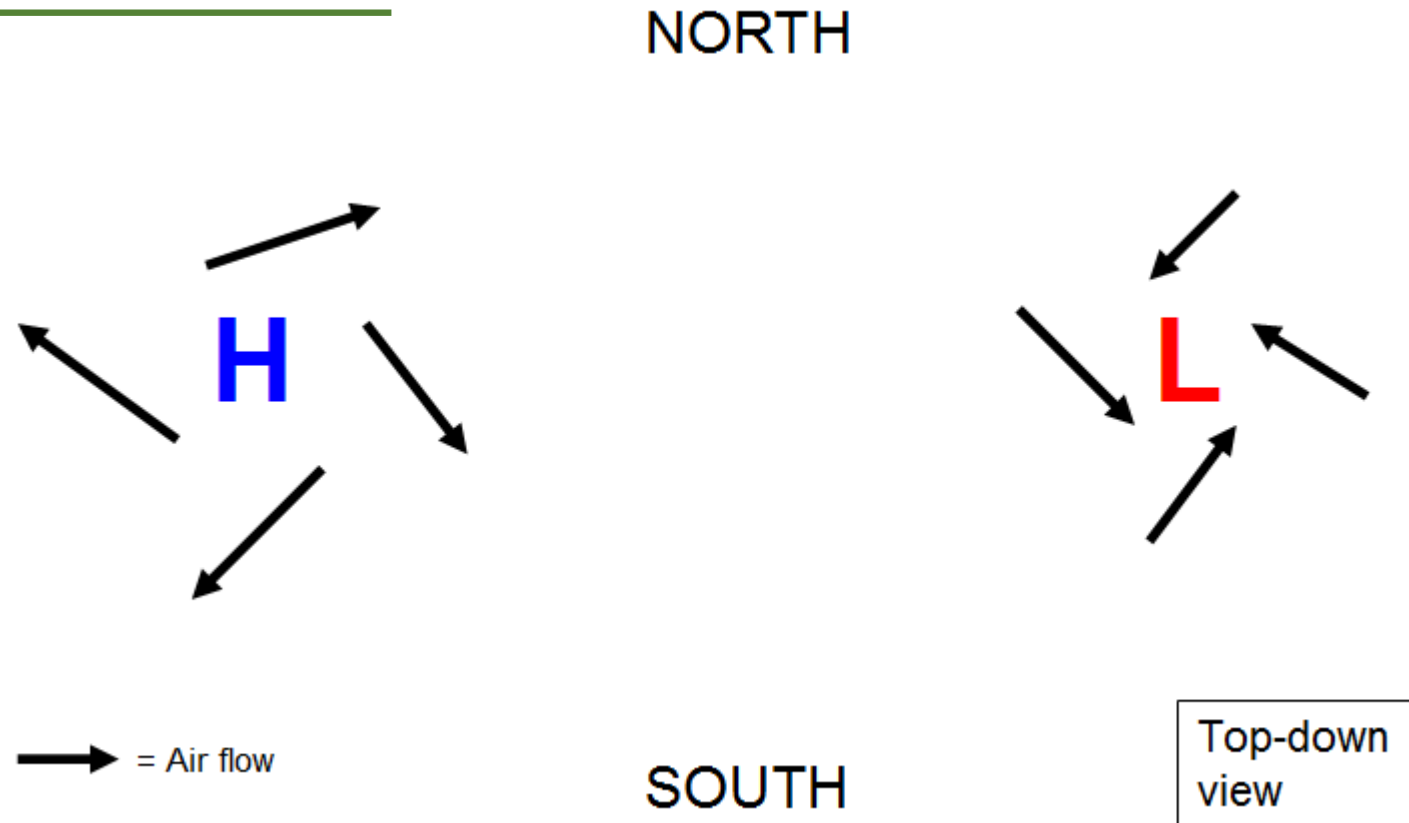
Why?

- Basically, warm air **cools** as it rises, which can cause water vapor in the air to **condense** into liquid water droplets, sometimes forming **clouds** and **precipitation**.
- On the other hand, **sinking air** is associated with **warming** and drying conditions.
- So the first important point to keep in mind is:
- **Warm rising air starts to cool and become moist**
- **Cool sinking air starts to warm and become dry**

What does this have to do with high and low pressure?

- High pressure is associated with sinking air, because the initial temperature is cool- **cool=sinking**
- Low pressure is associated with rising air, because the initial temperature is warm- **warm=rising**

Pressure Centers

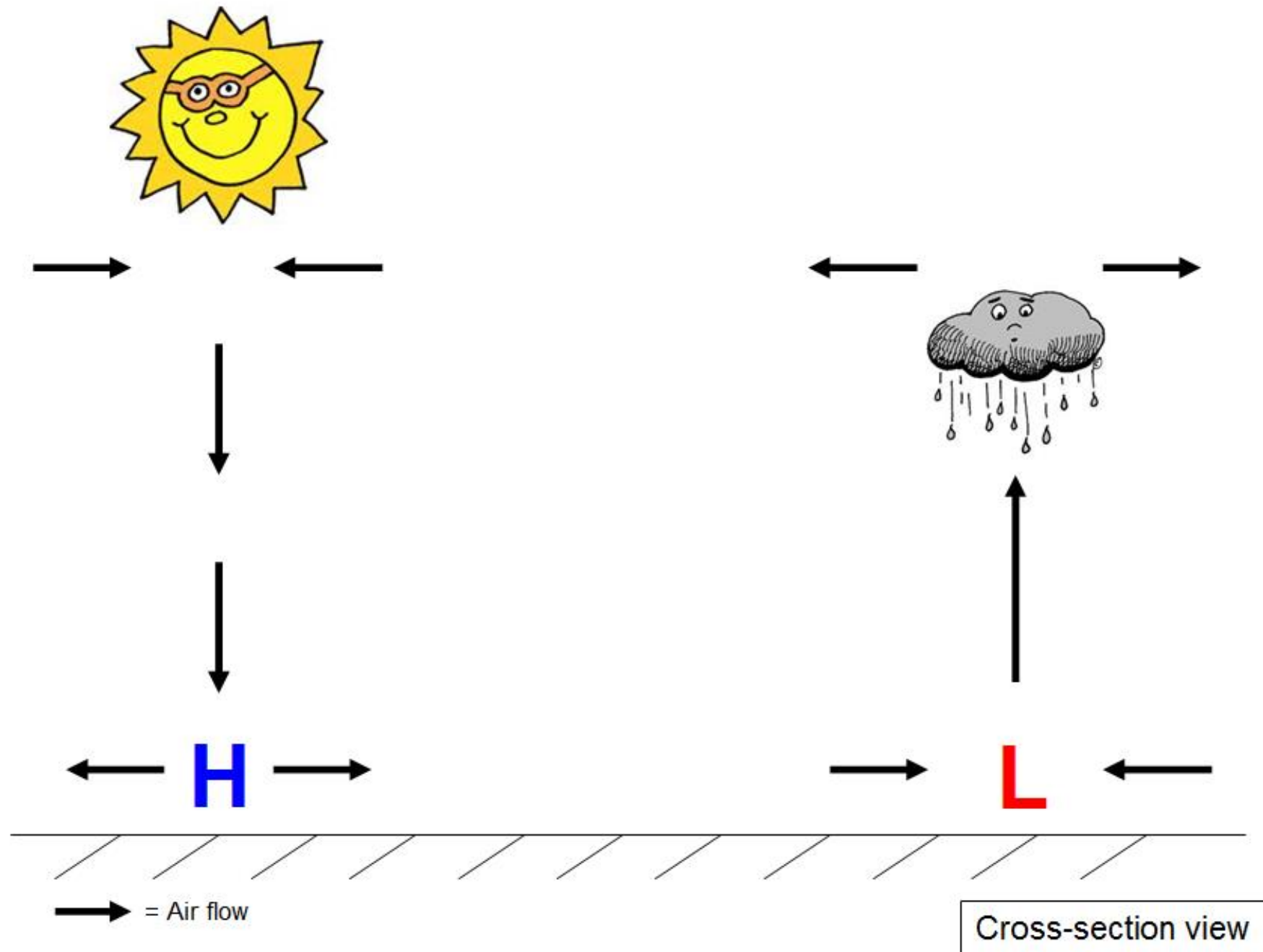


★ Remember:
Air Pressure
flows from
High to Low

- Airflow (due to the Earth's rotation and friction) is directed slightly inward toward a **low pressure center**, and slightly outward away from a **high pressure center**

- **H**=Air is moving away from the center. So air from above will sink to take its place.

-
- **L**= Air is moving toward the center. So it will converge and rise, then CCC will occur.



Low Pressure Center vs. High Pressure Center

- Low Pressure Center

- The slightly inward moving air in a low pressure center causes air to **converge** and since it can't move downward, the air is forced upward.
- This leads to cooling, condensation, cloud formation, then precipitation

- High Pressure Center

- The opposite occurs with high pressure. At the surface, air is moving away from the high pressure center (or “diverging”)
- So as a result, air from above must sink to take its place.