

# Happy Friday: A/C Science

## Agenda:

- 1) **Notebook Check (looking for the following items: Vocabulary Section, Notes on Atmosphere and Wind)**
- 2) Please turn in the Web-quest from Wednesday. (If not completed, turn in anyway and we will complete next week in lab)
- 3) Finalize Water Tower Presentations (Winners from class will be announced on Monday)
- 4) Notes Air Pressure
- 5) Draw Atmosphere

# Air Pressure (fill in visual organizer)

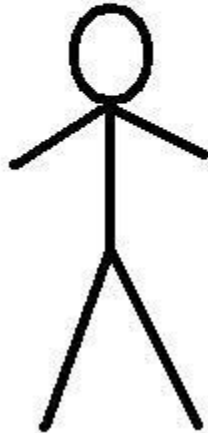
- As you increase altitude/elevation, air pressure, density, **and** temperature **DECREASES** (ex: ears pop due to pressure change)



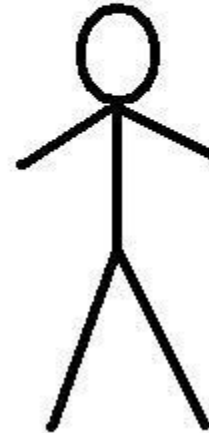
# Air Pressure



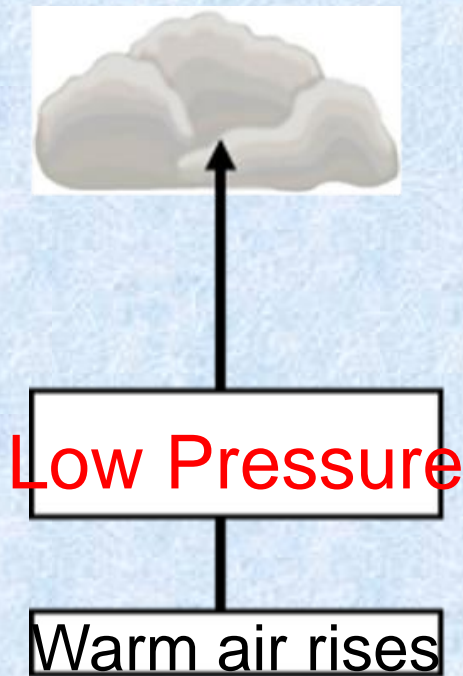
**High Pressure**



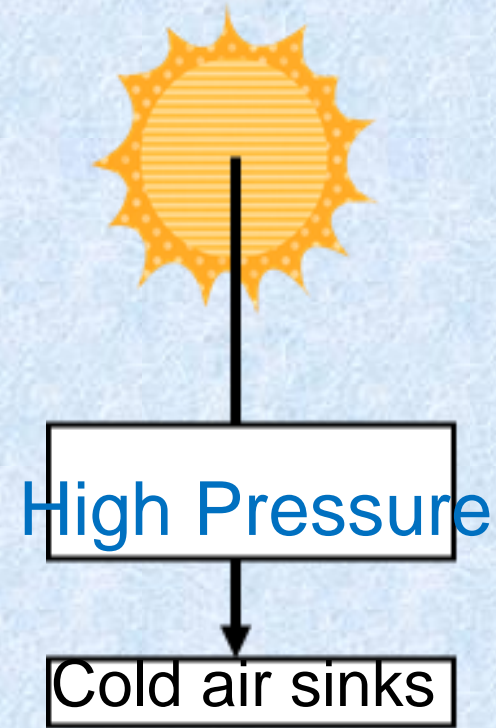
**Low Pressure**



- Warm air rises, creating **LOW PRESSURE** (clouds form if enough moisture)



- Cool air sinks, creating **HIGH PRESSURE** (results in few or no clouds)



# Weather and air pressure

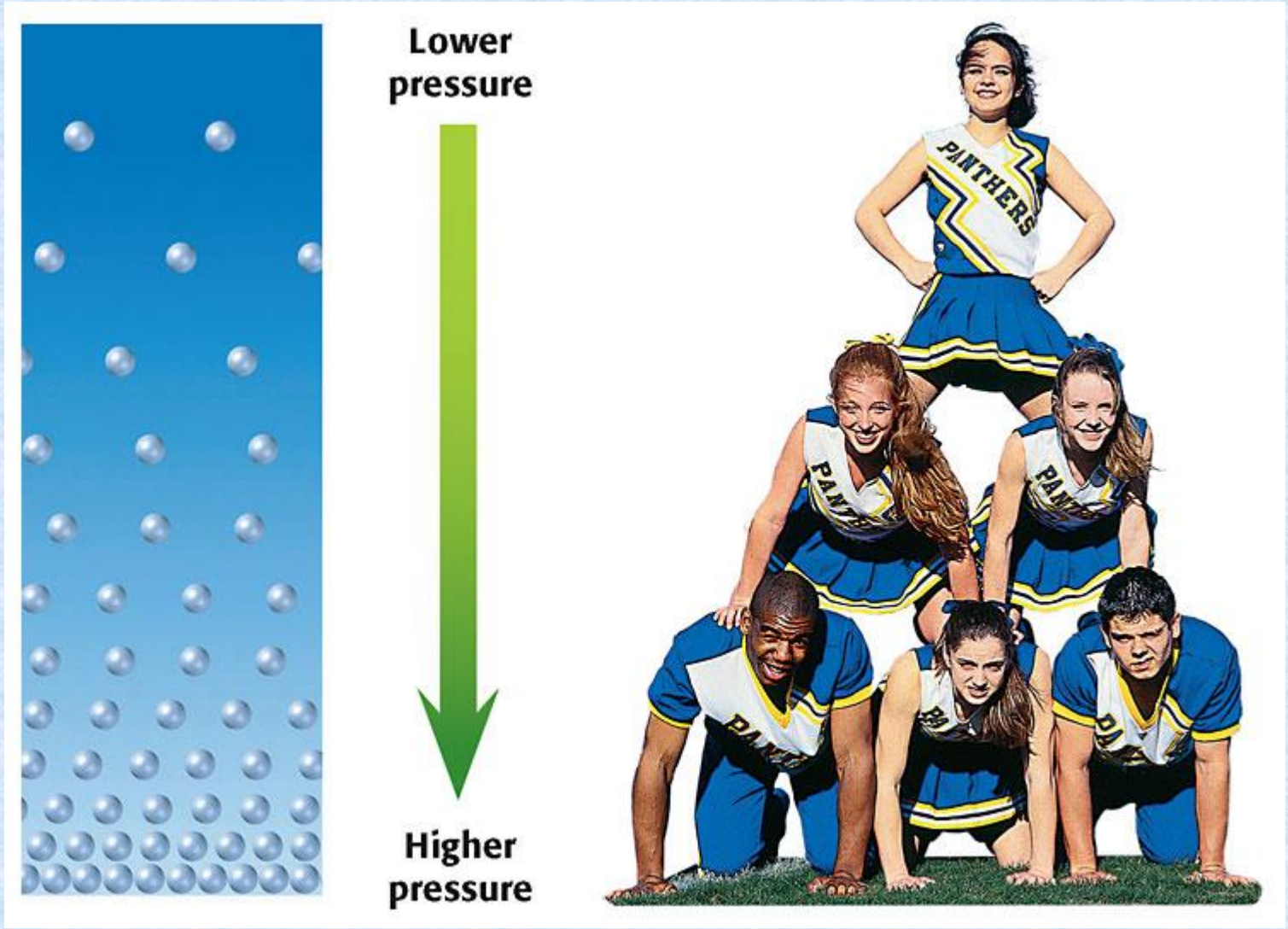
- Low pressure= “lousy” weather

(unless we're in a drought)



- High pressure= “happy” weather





Stand up and sit down in your chair = rising and sinking air

# Units & Instrument of pressure

- Instrument= barometer  
(2 types)—aneroid\*  
and mercury
- inches of mercury (avg= 29.92")
- metrics= millibars (avg= 1013 mB)

\*\*air pressure is mainly influenced  
by air temperature and elevation

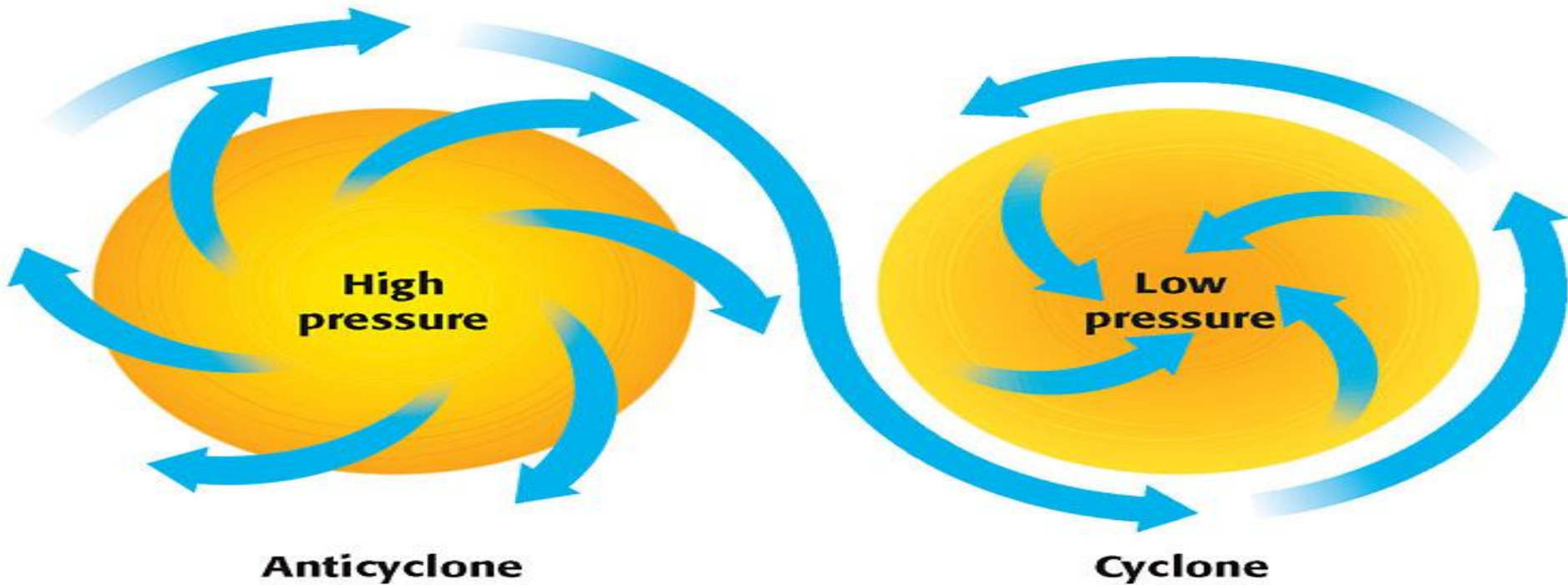


- **high pressure**

- anticyclone (air sinks)
- usually fair weather
- winds spin CW

- **low pressure**

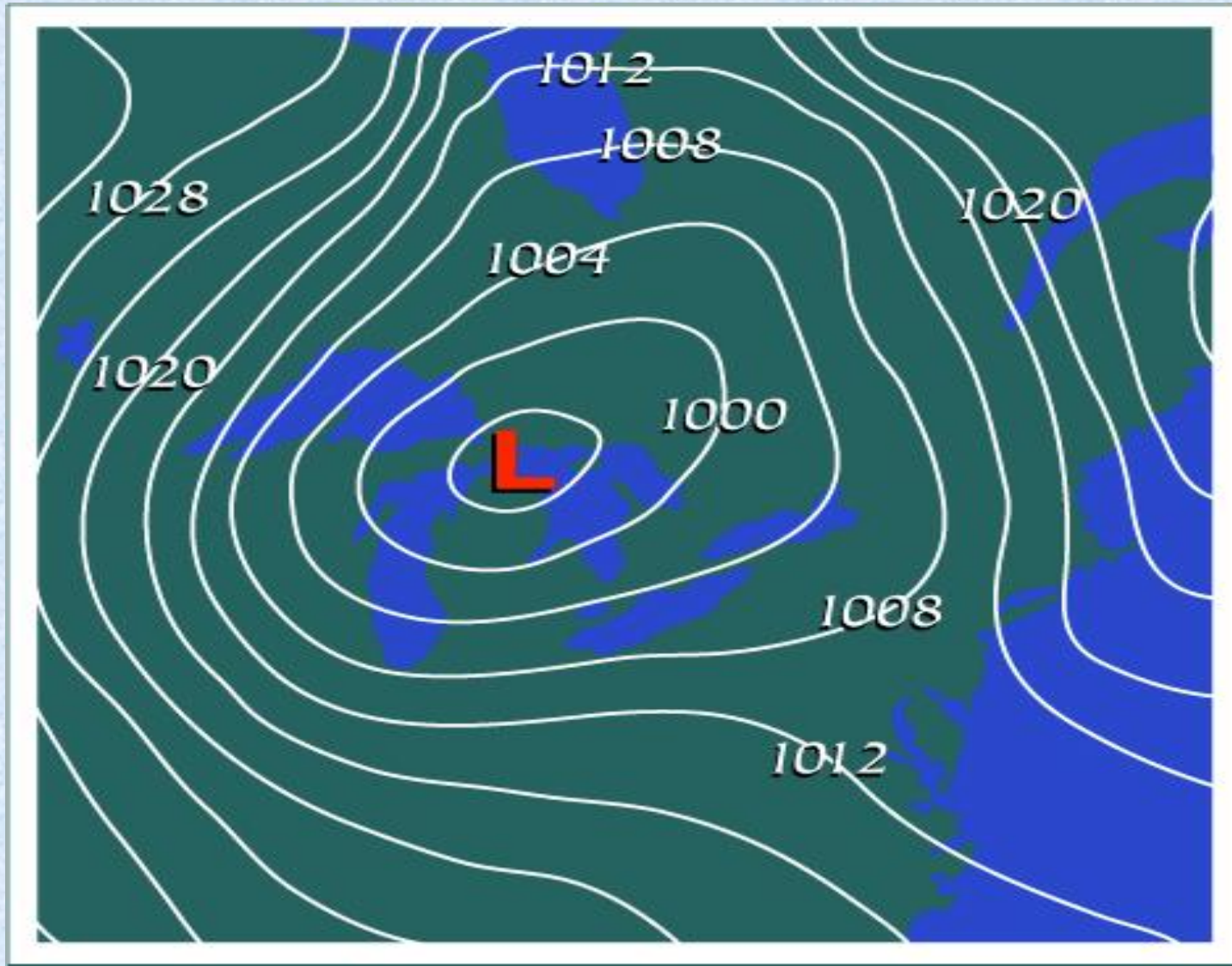
- cyclone (air rises)
- usually clouds/precip.
- winds spin CCW



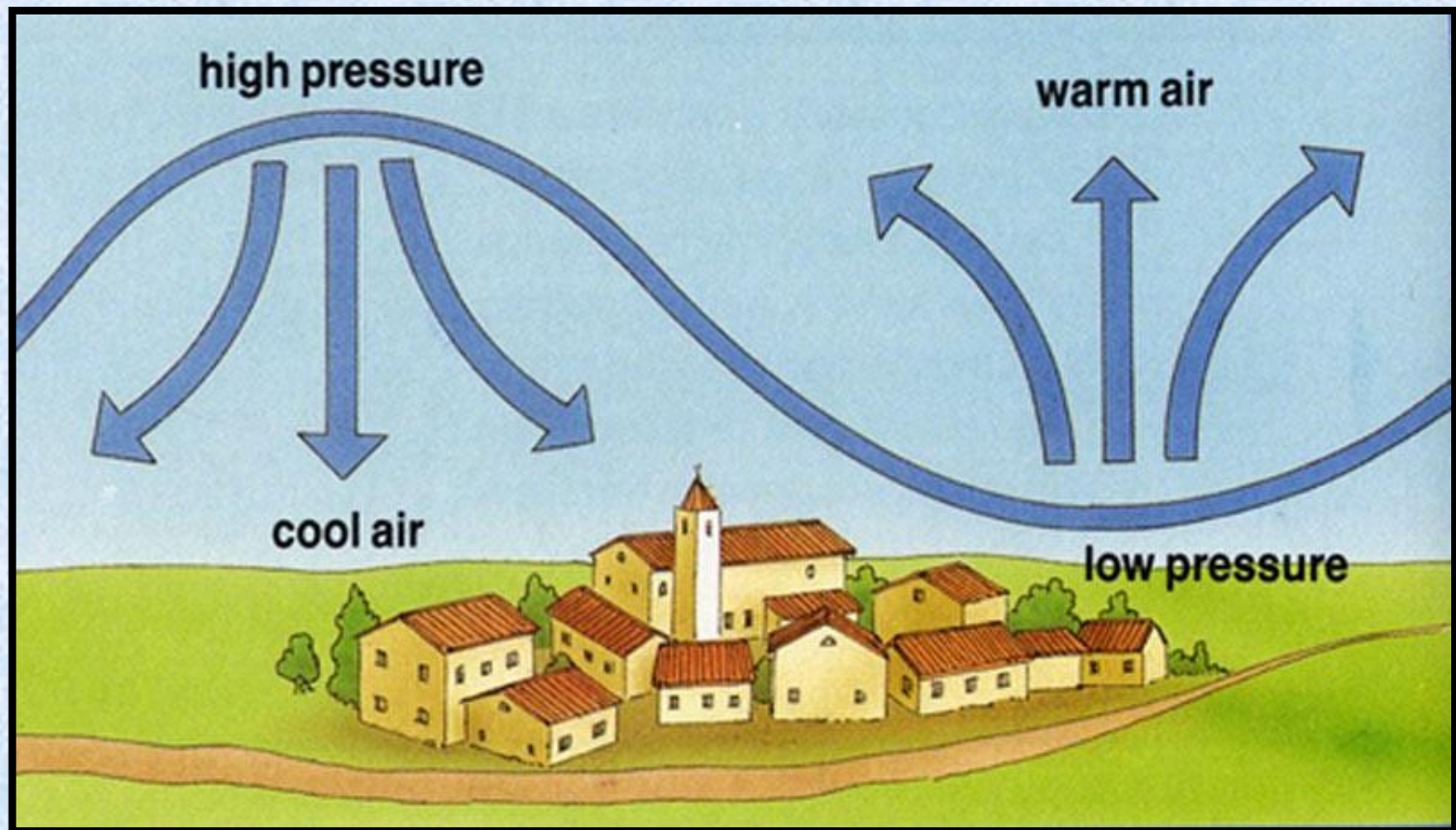
Average air pressure is 29.92 inches of Hg (1013 mb)



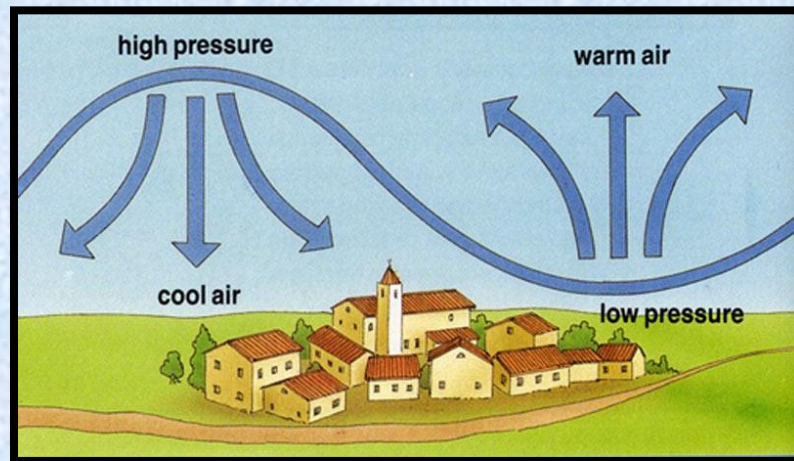
# Isobars {enrich} (lines of equal air pressure)



# AIR PRESSURE and WEATHER

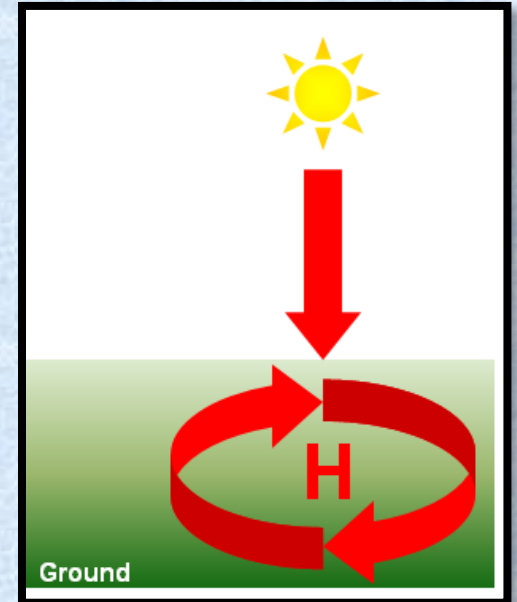


The weight of the atmosphere presses down on every part of the Earth's surface. The pressure exerted by the Earth's atmosphere at any given location is called the barometric atmospheric pressure or pressure.



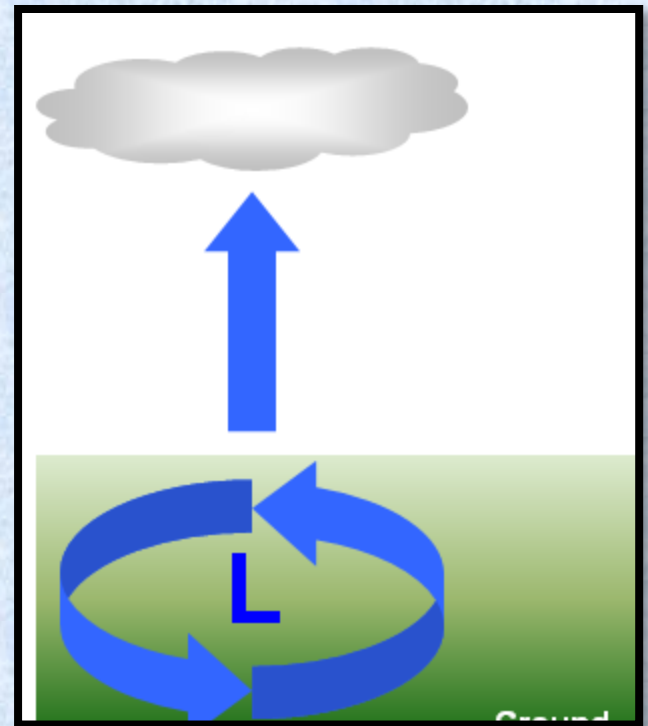
In high pressure areas, air is more dense than in areas of lower pressure. The high pressure keeps water vapor from rising and forming rain clouds. The air is sinking. High pressure areas, or highs, are shown by “H” symbols.

*High barometric pressure supports sunny, clear, and favorable weather conditions.*



In low pressure areas, air is less dense than in areas of higher pressure. The low pressure allows air to rise. Moist water vapor can rise and form storm clouds. Low pressure areas, or lows, are shown by “L” symbols.

*Low barometric pressure supports unstable, and sometimes stormy weather conditions.*



# Earth's Atmosphere is made up of 5 different layers

