Warm up

- Get out your chromebook and record the hurricanes (*including tropical storms, tropical depressions, and remnants*) on your map you got last week. **Include storm name, today's date, and wind speed.**

Learning Objective

- I will explain the relationship between the movement of air masses, high and low pressure systems, and frontal boundaries to storms (including thunderstorms, hurricanes, and tornadoes) and other weather conditions that may result.
- I will name and describe the four different types of air masses.

Pressure Systems & Air Masses

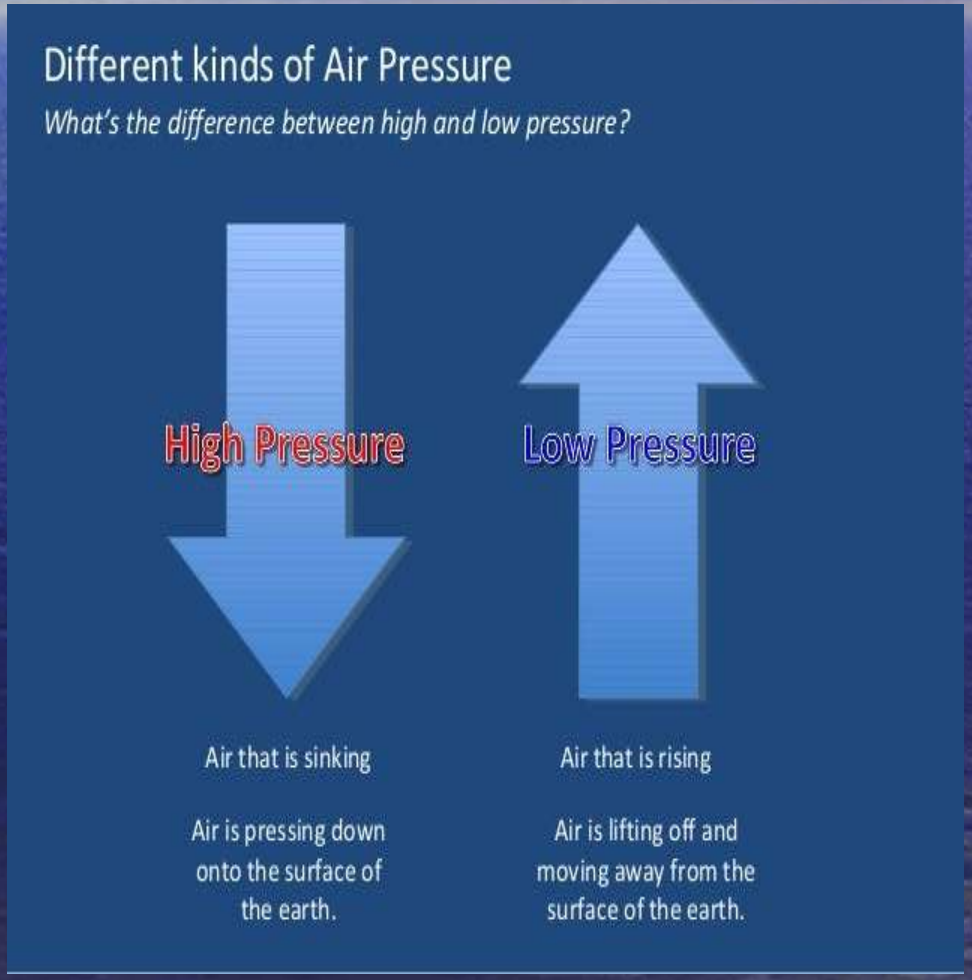
Science 7th Grade

Atmospheric Pressure

- The force of air molecules pushing on an area.
- Air pushes in all directions.
- The greater the force the higher the air pressure.
- Decreases as you move higher in the atmosphere and increases the closer to sea level.

Atmospheric Pressure

- Air pressure also decreases as the amount of water vapor in the air goes up.
- The higher the temperature, the air pressure is usually lower.

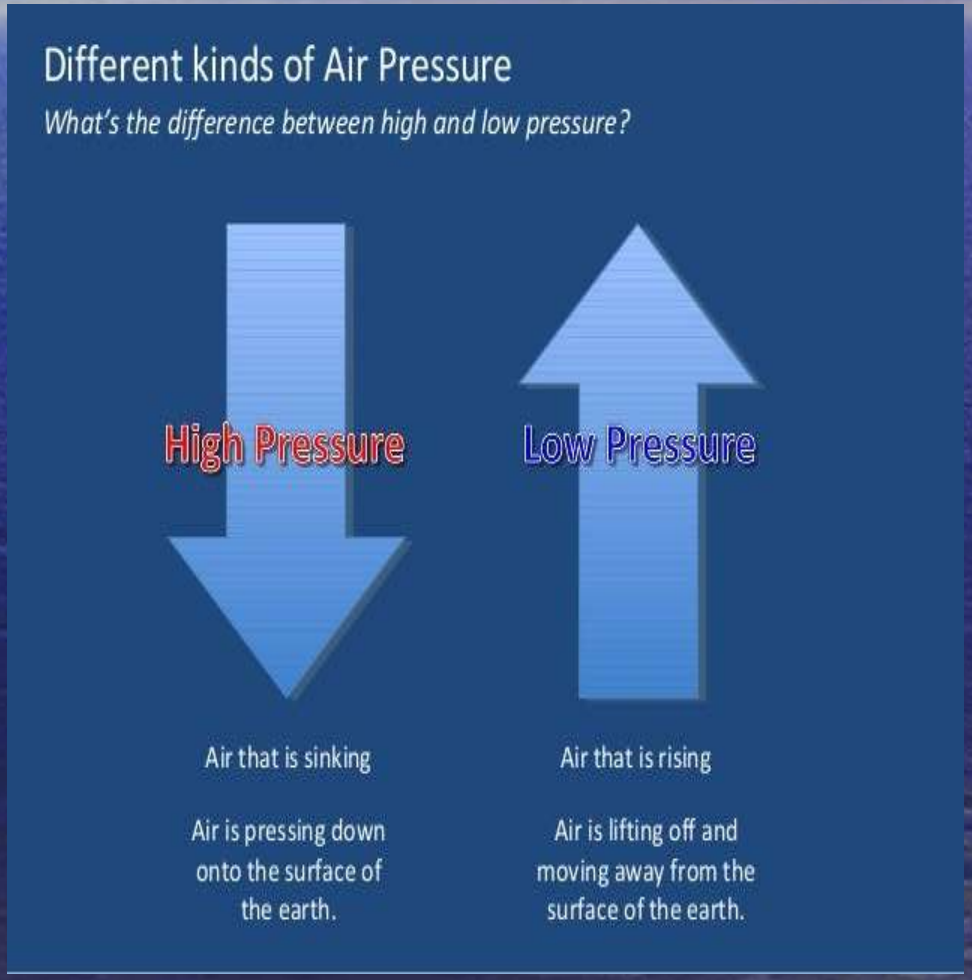


Atmospheric Pressure

High pressure systems are associated with nice weather.

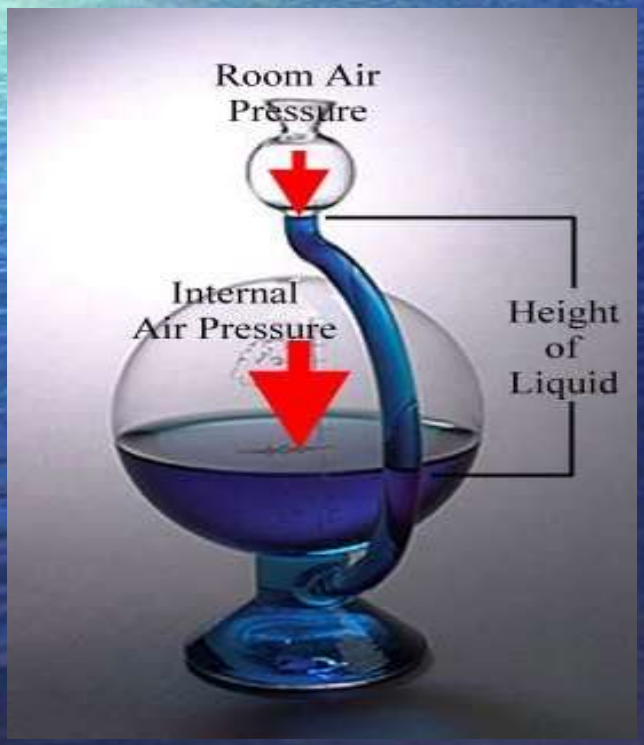
Low pressure systems are associated with bad weather.

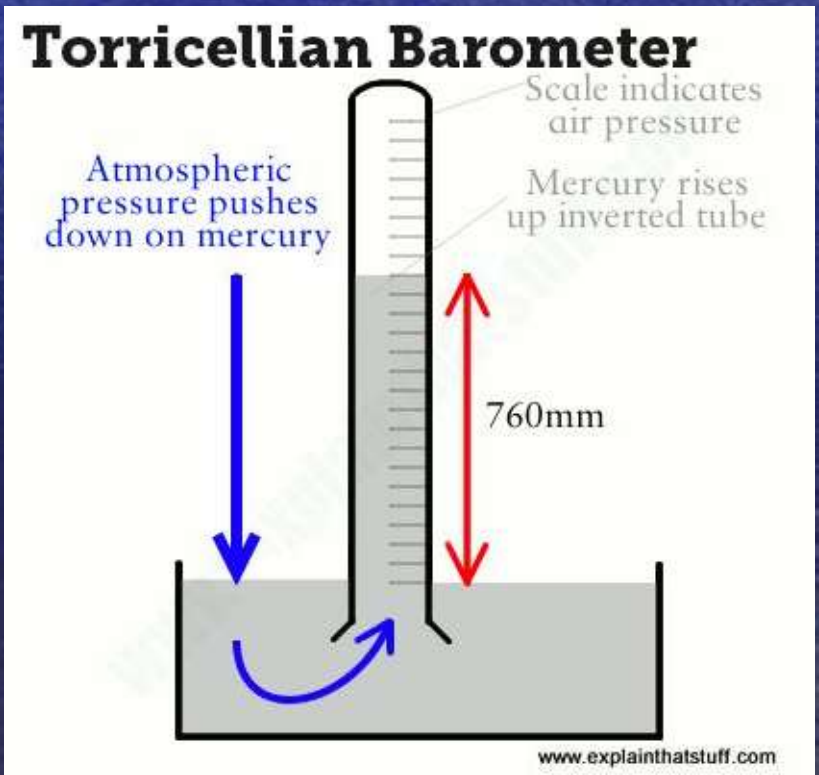
Video



Measurement

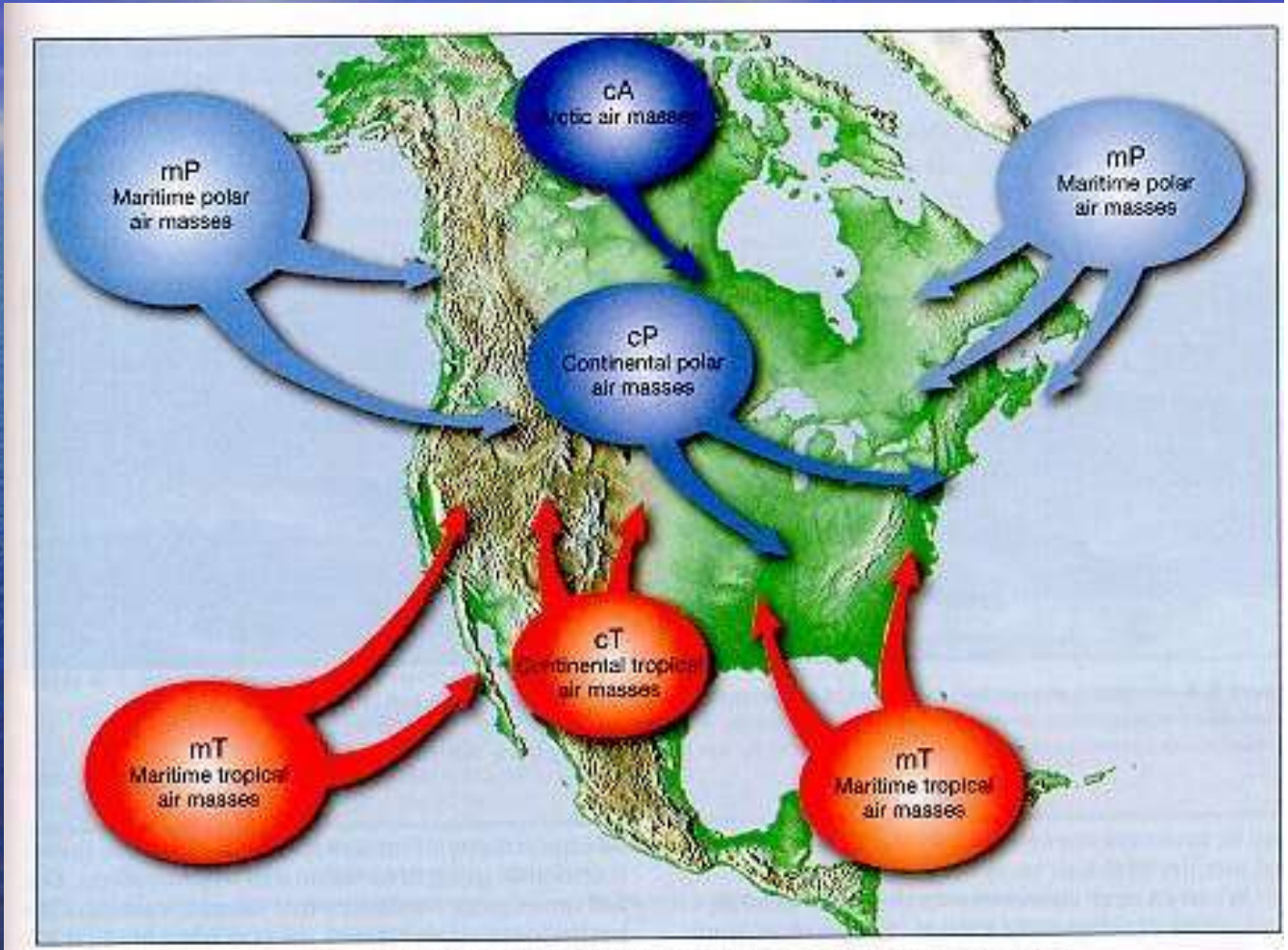
A Barometer is an instrument that measures air pressure. The greater the force the greater the pressure.





Air Mass

- A large body of air with similar temperature, humidity, and air pressure.
- Air masses form over large land or water masses.



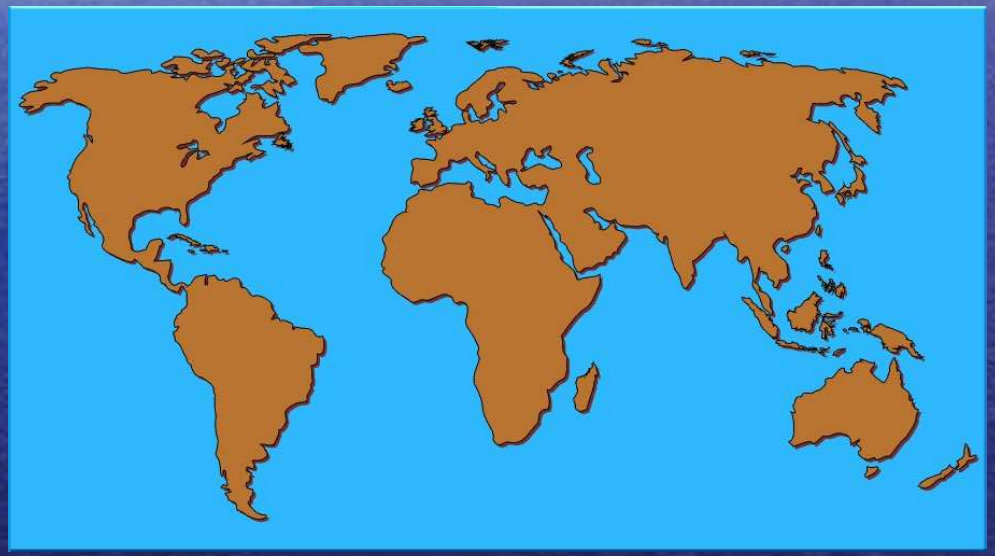
Air-mass source regions for North America. (Courtesy of Ward's Natural Science Establishment, Inc., Rochester, N.Y.)

- Whether an air mass is warm or cold depends on the temperature over which the mass forms.
- 4 types of air masses

1. Tropical – warm air masses that form over the tropics.
2. Polar – cold air masses that form over the poles.
3. Maritime – air masses that form over the ocean (very humid)
4. Continental – form over land – (are dry)

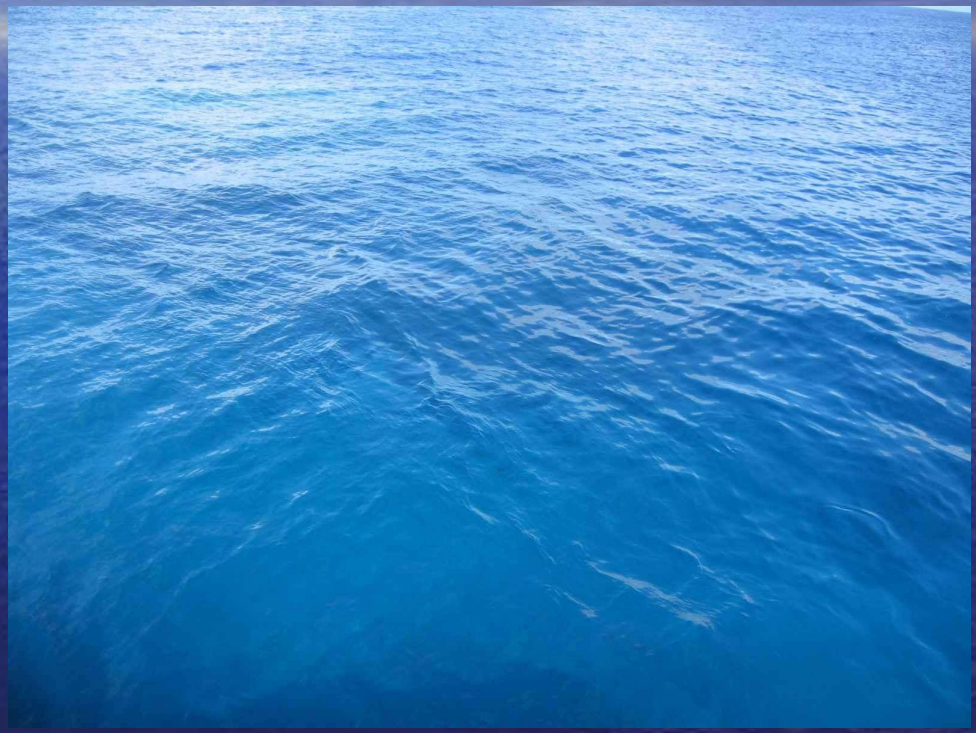
Continental -

- Means land.
- A Continental air mass forms over land.



Maritime -

- Means water.
- Maritime air masses form over water.

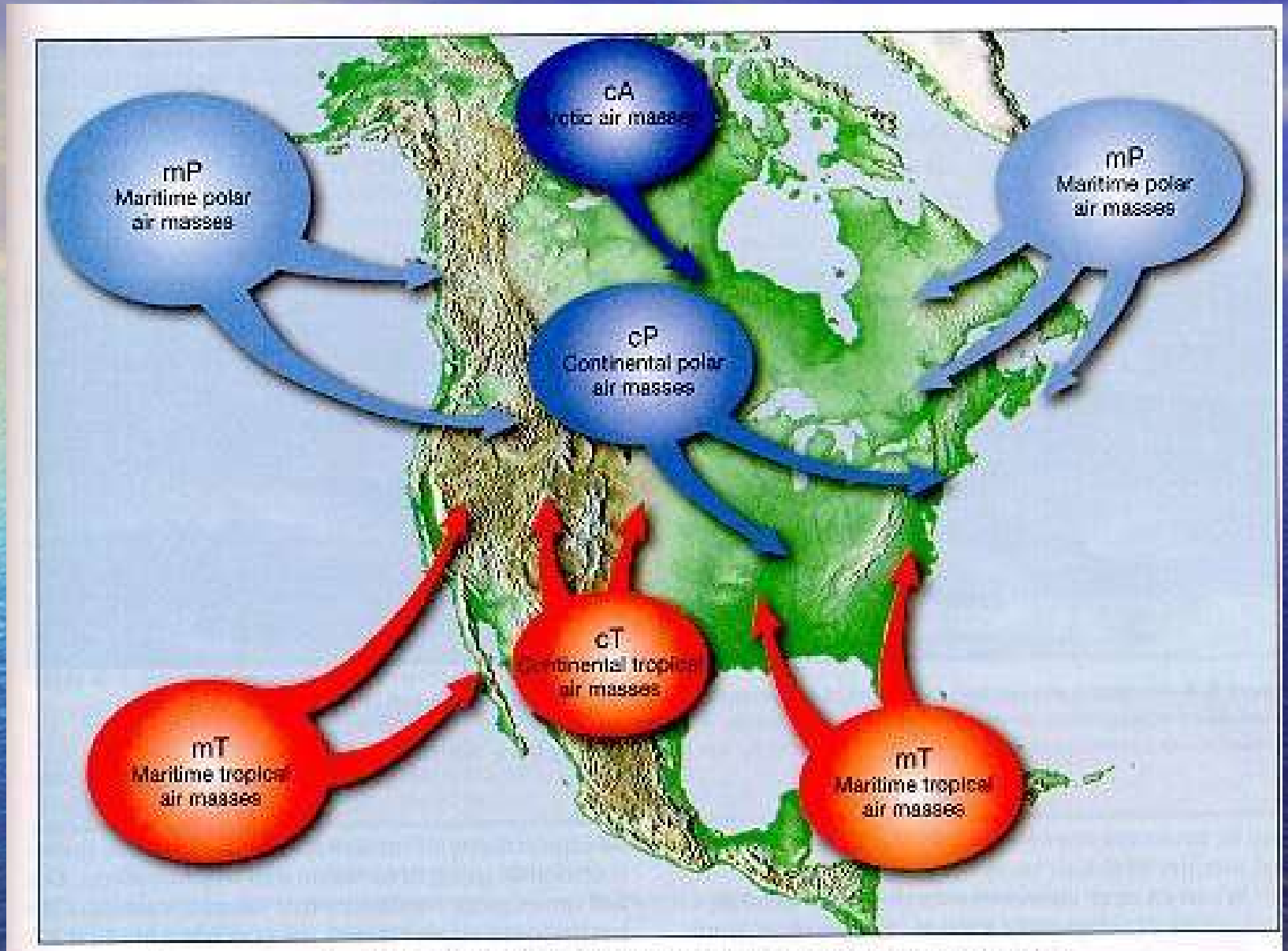


Polar

- Polar means it forms over the poles.
- COLD!

Tropical

- Form over the tropics (near the equator)
- WARM!!



Air-mass source regions for North America. (Courtesy of Ward's Natural Science Establishment, Inc., Rochester, N.Y.)

Assignment & Homework

Kahoot

Make a barometer.

You will needGlass jar

- Balloon
- Pair of scissors
- Thick elastic band
- Drinking straw
- Pens
- Paper
- Tape

Article on Air Masses

Article