



AIR MASSES AND FRONTS

HOW ARE AIR MASSES AND FRONTS RELATED TO WEATHER?

AIR MASSES AND FRONTS

- AIR MASS - CHARACTERISTICS OF THE AIR IDENTIFIED BY TEMPERATURE AND MOISTURE
- SOURCE REGION - LOCATION OVER WHICH AN AIR MASS GETS ITS CHARACTERISTICS
 - AIR MASSES ARE NAMED AFTER THEIR SOURCE REGION AND ARE DESIGNATED BY LETTERS

Air Masses

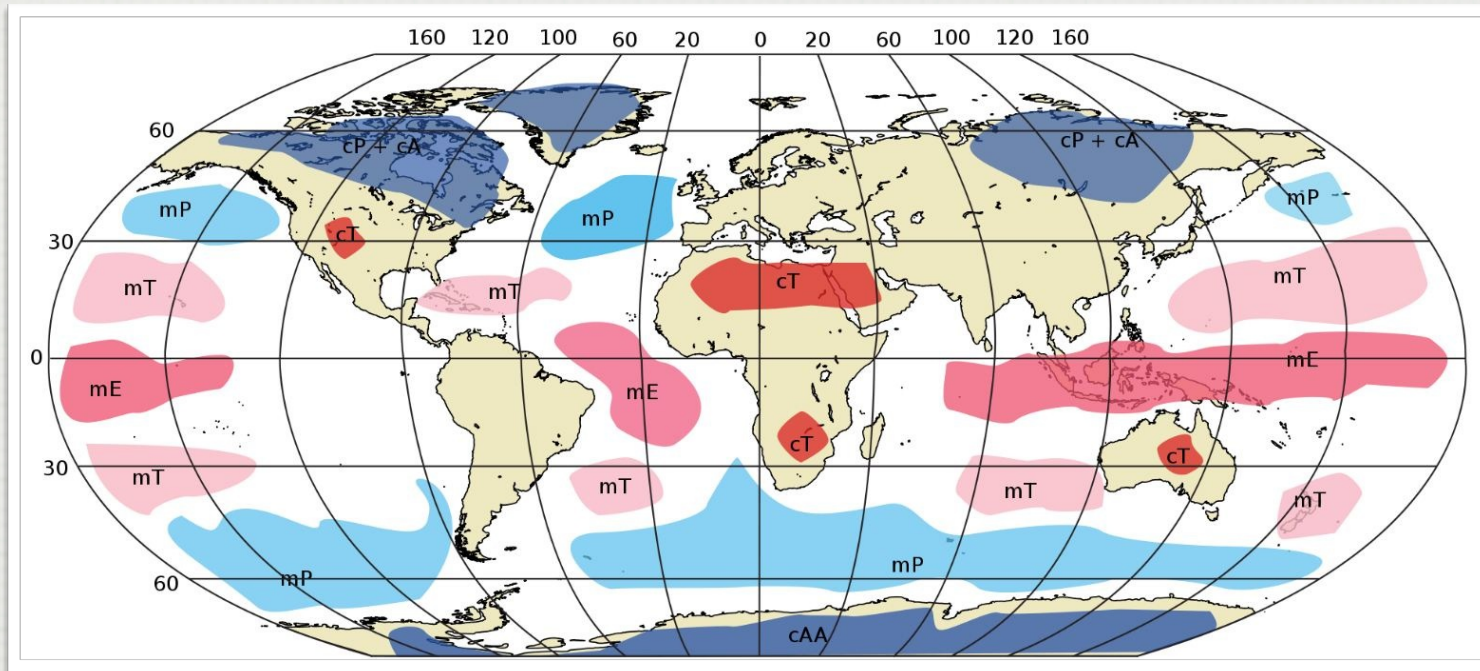
cA continental arctic

cP continental polar

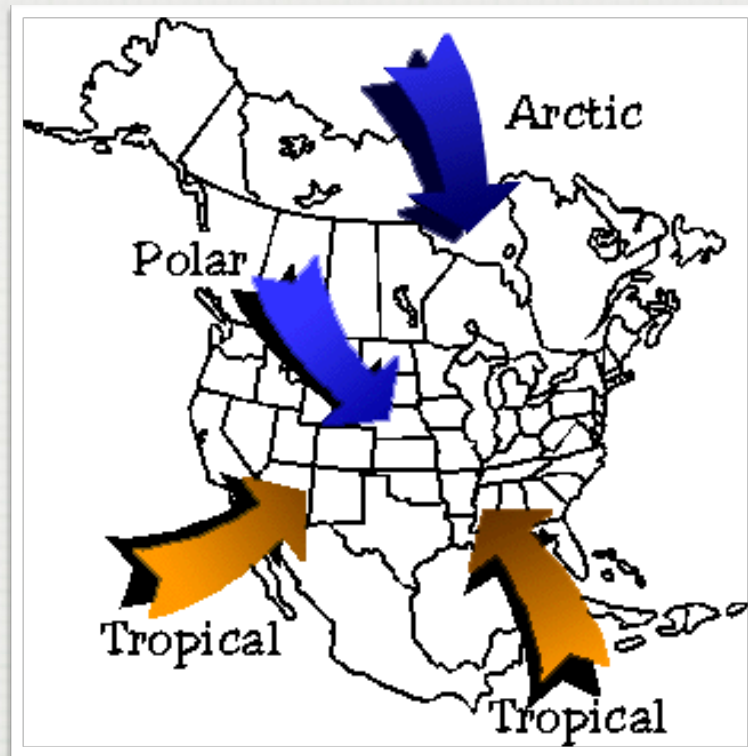
cT continental tropical

mT maritime tropical

mP maritime polar



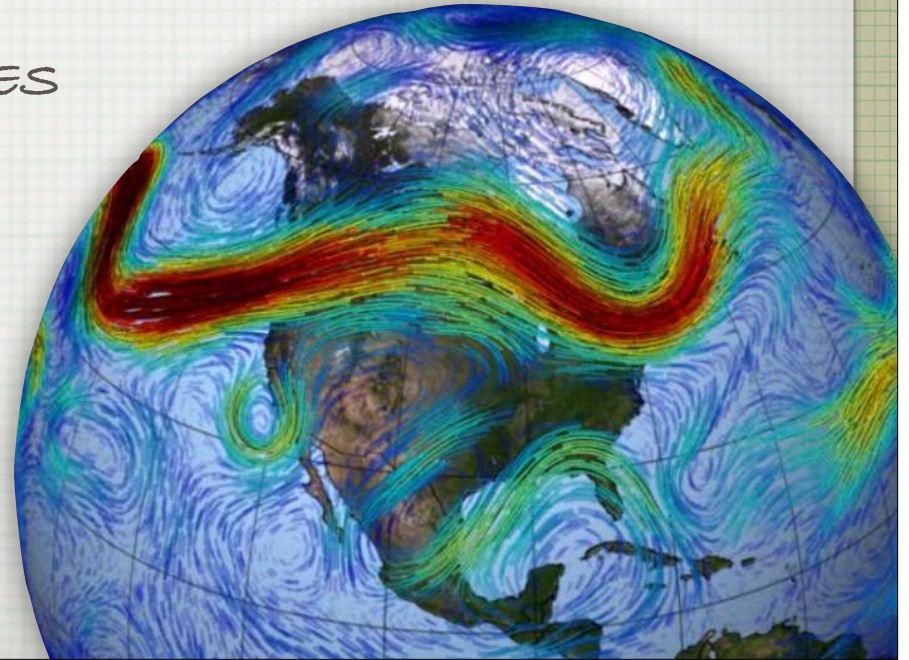
AIR MASSES & SOURCE REGIONS



AIR MASSES & SOURCE REGIONS

AIR MASSES AND FRONTS

- JET STREAM - NARROW BAND OF A STRONG AIR CURRENTS ABOVE EARTH'S SURFACE
 - HELP MOVE AIR MASSES AROUND THE GLOBE



AIR MASSES AND FRONTS





- WHEN TWO UNLIKE AIR MASSES COLLIDE A WEATHER FRONT IS CREATED



AIR MASSES AND FRONTS

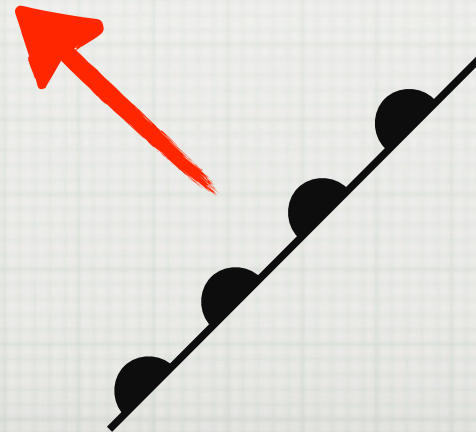
- THE BOUNDARY BETWEEN THE TWO DIFFERENT AIR MASSES IS REPRESENTED ON A MAP WITH A SYMBOL

Fronts

Cold	
Warm	
Stationary	
Occluded	

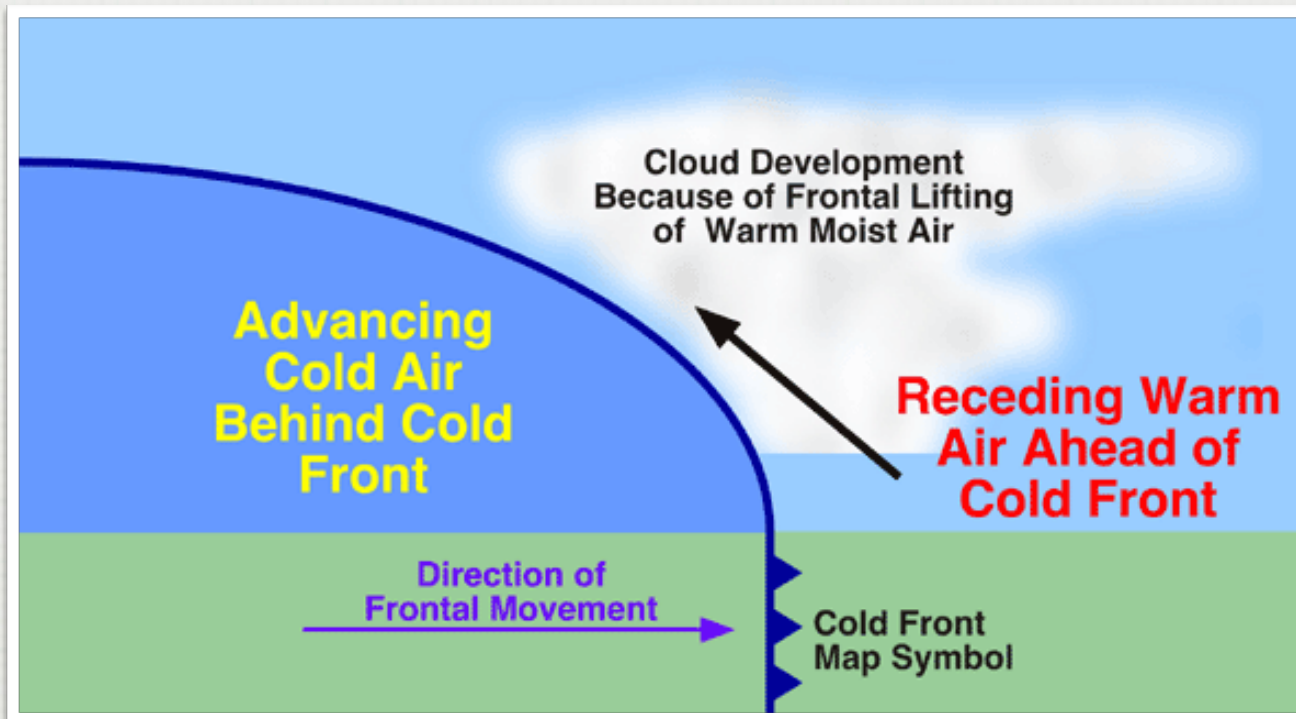
AIR MASSES AND FRONTS

- THE SIDE THAT THE SHAPES ARE ON SHOWS THE DIRECTION THE FRONT IS MOVING TOWARDS



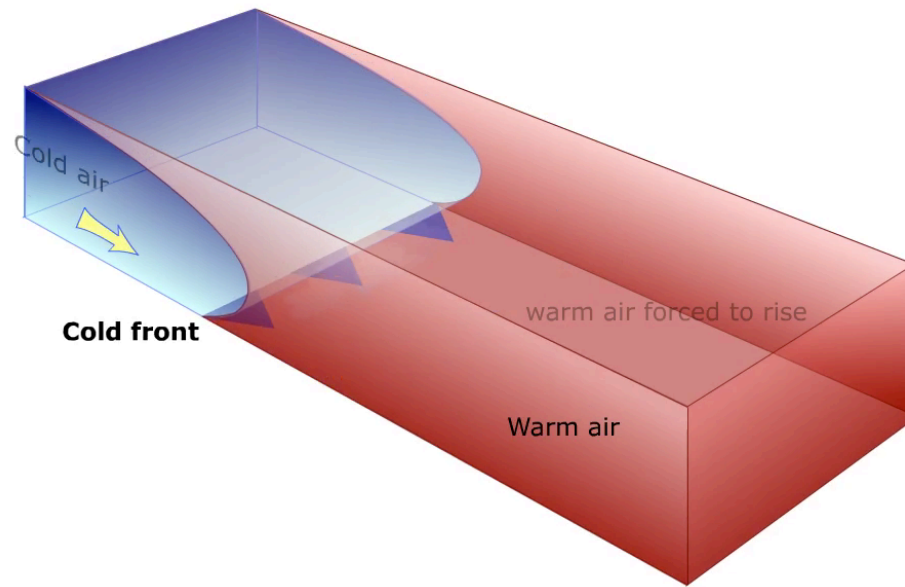
AIR MASSES AND FRONTS

- COLD FRONT - A BOUNDARY WHERE MORE DENSE COLD AIR ADVANCES UNDER LESS DENSE WARM AIR PUSHING IT UPWARD
 - WEATHER: THUNDERSTORMS, HEAVY RAIN, AND A SHARP DECREASE IN TEMPERATURE



COLD FRONT

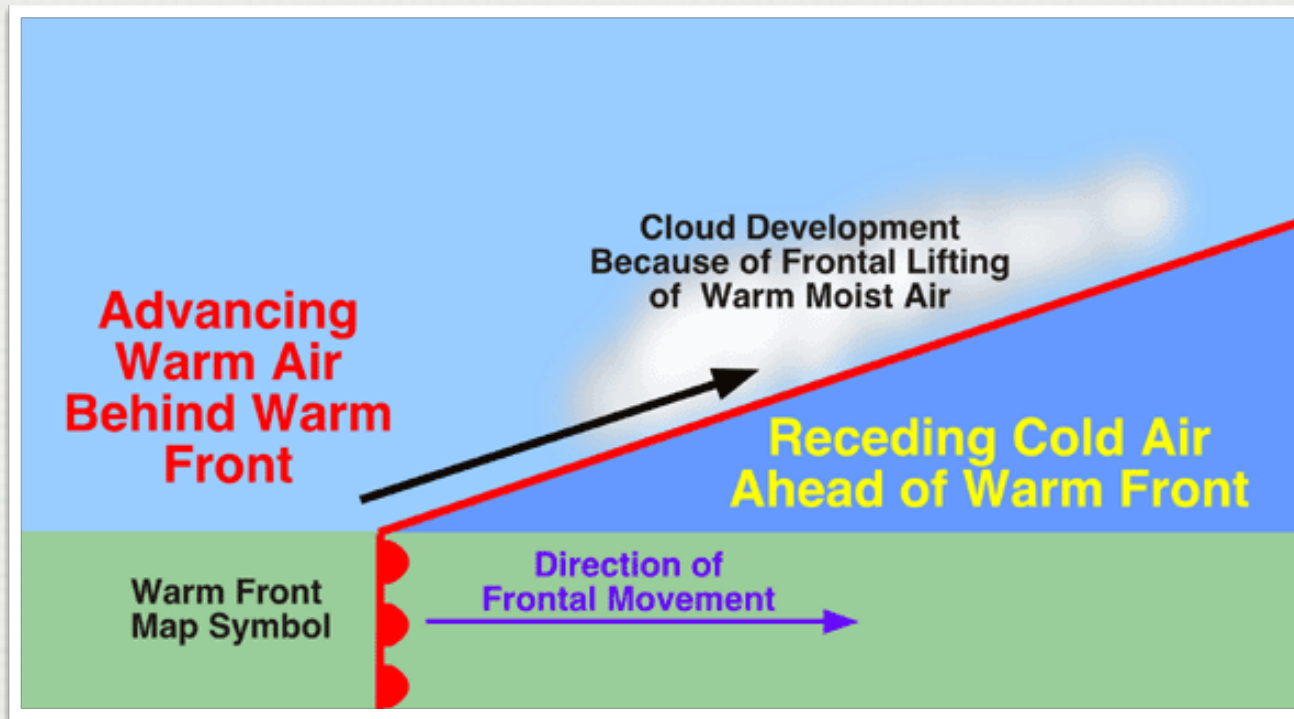
**Cold
Front
Animation**



COLD FRONT

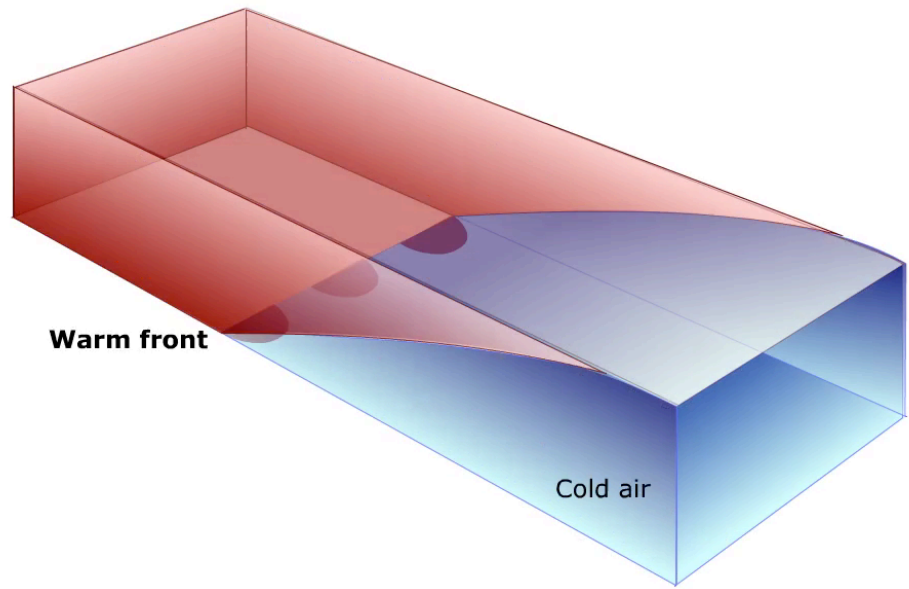
AIR MASSES AND FRONTS

- WARM FRONT - A BOUNDARY WHERE LESS DENSE WARM AIR ADVANCES OVER THE TOP OF MORE DENSE COLD AIR
 - WEATHER: LOW CLOUDS AND WIDESPREAD RAINFALL



WARM FRONT

**Warm
Front
Animation**



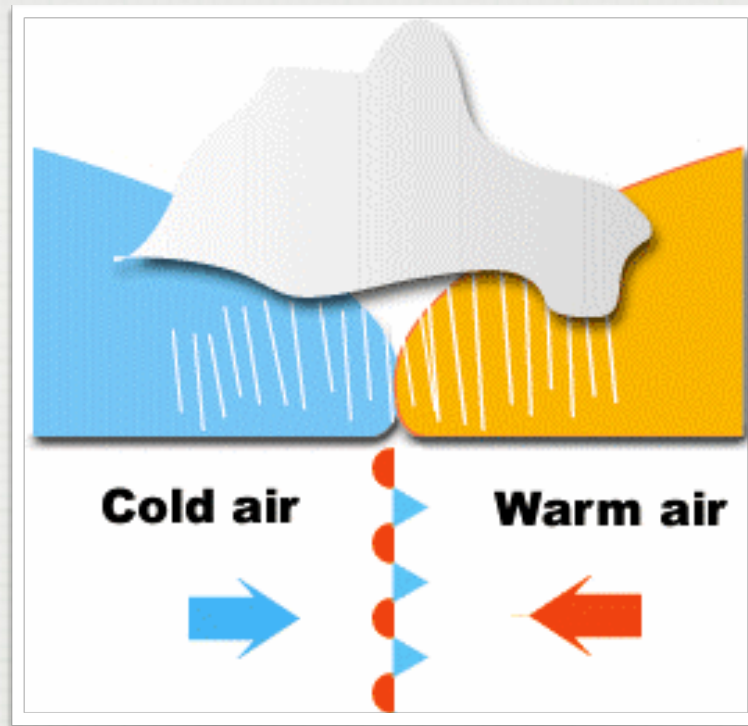
Warm front

Cold air

WARM FRONT

AIR MASSES AND FRONTS

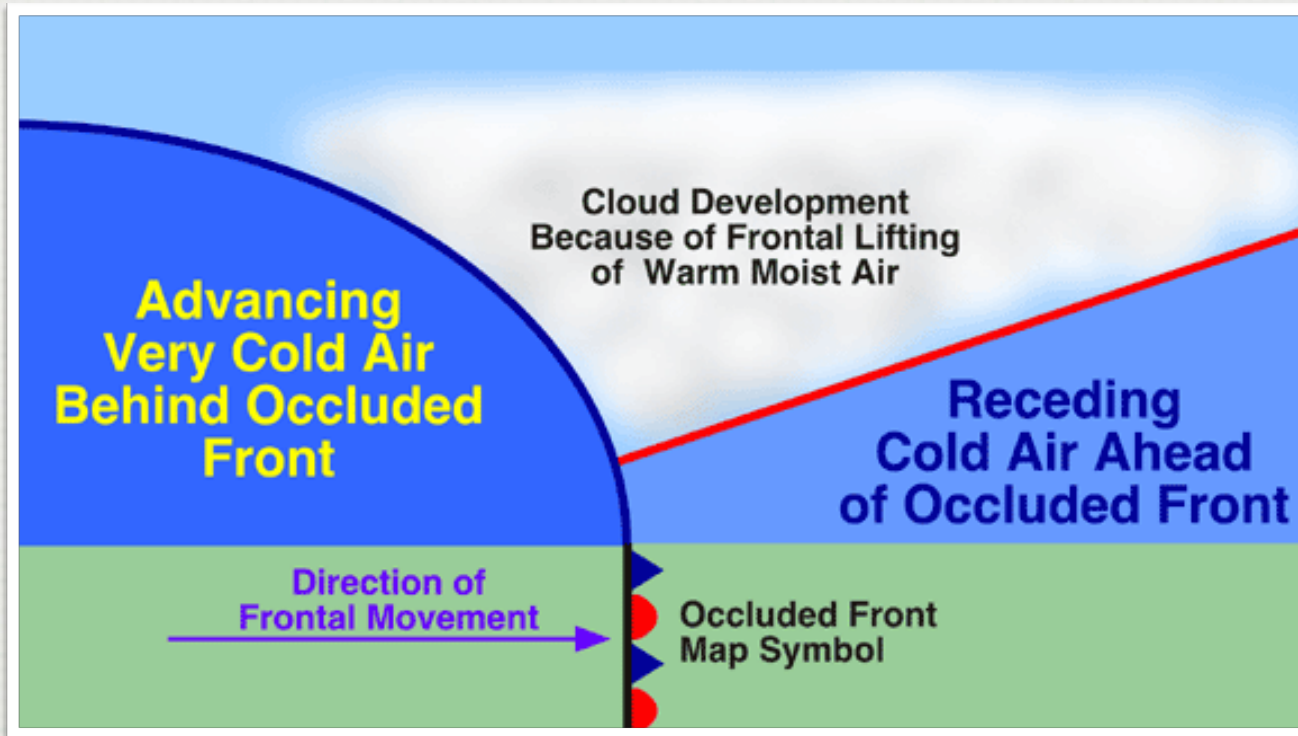
- STATIONARY FRONT - FORMS ALONG A BOUNDARY WHERE NEITHER AIR MASS IS MOVING
 - WEATHER: LONG WIDESPREAD RAIN



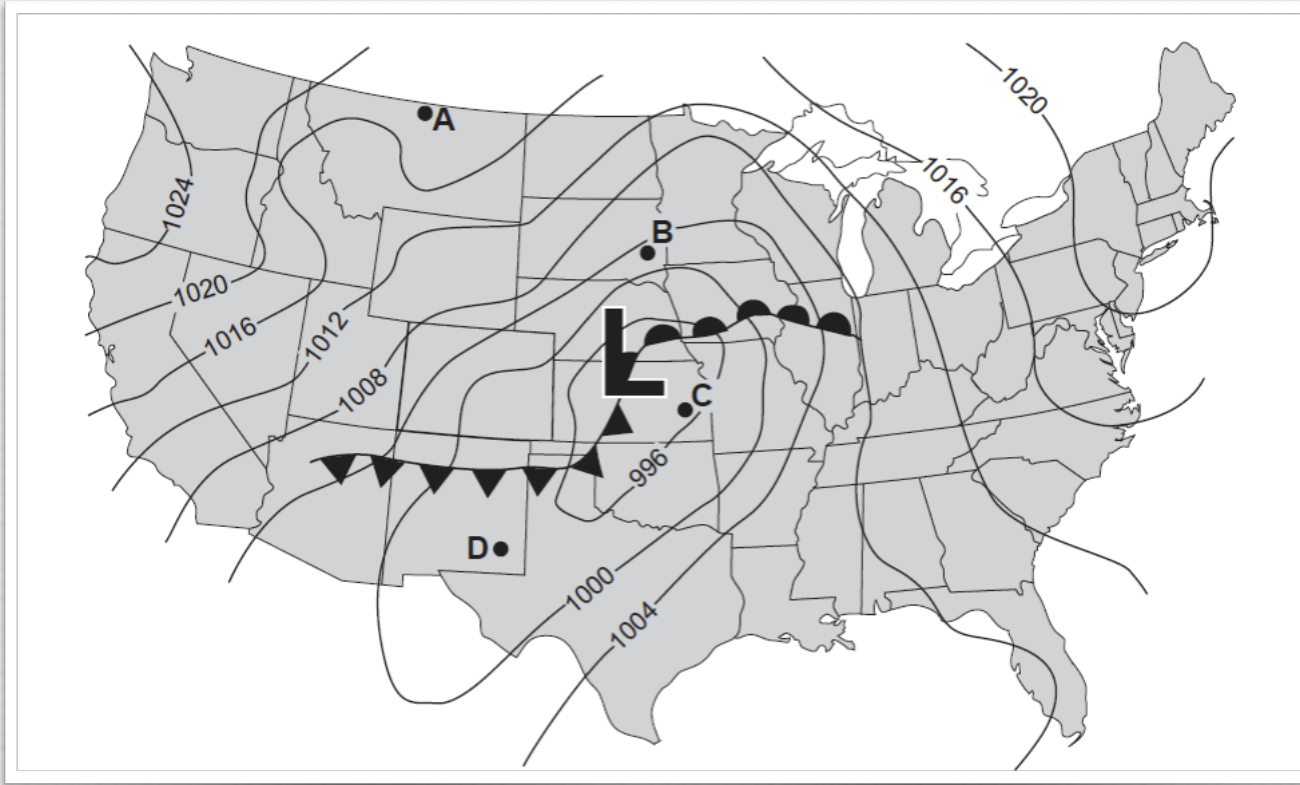
STATIONARY FRONT

AIR MASSES AND FRONTS

- OCCLUDED FRONT - A BOUNDARY WHERE A FAST MOVING COLD FRONT PUSHES WARM AIR ENTIRELY ALOFT
 - WEATHER: LONG WIDESPREAD RAIN AND THUNDERSTORMS



OCCLUDED FRONT



U.S. SYNOPTIC WEATHER MAP