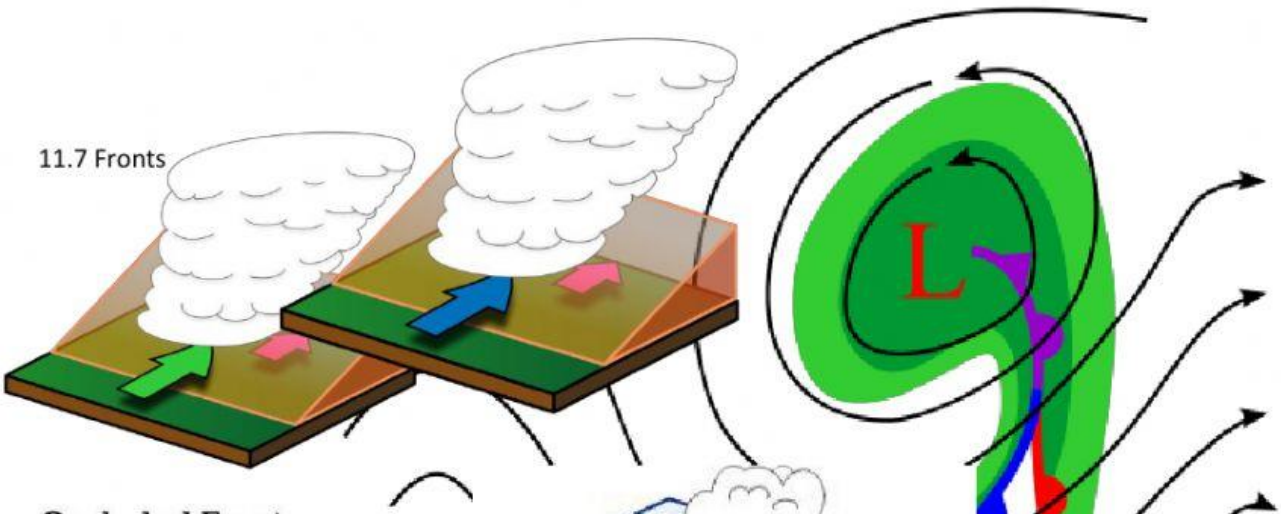
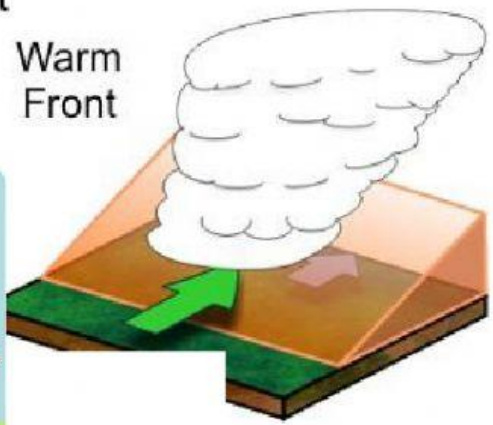
11.7 Fronts



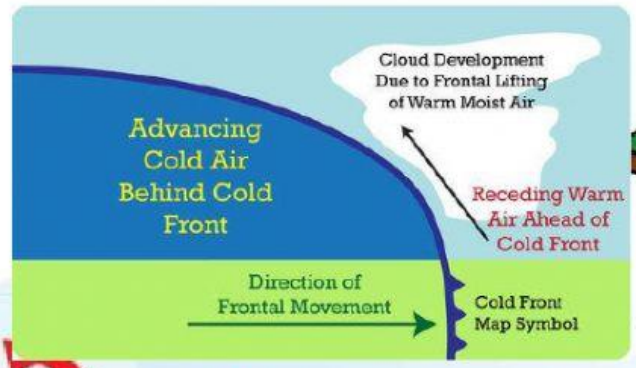
Occluded Front

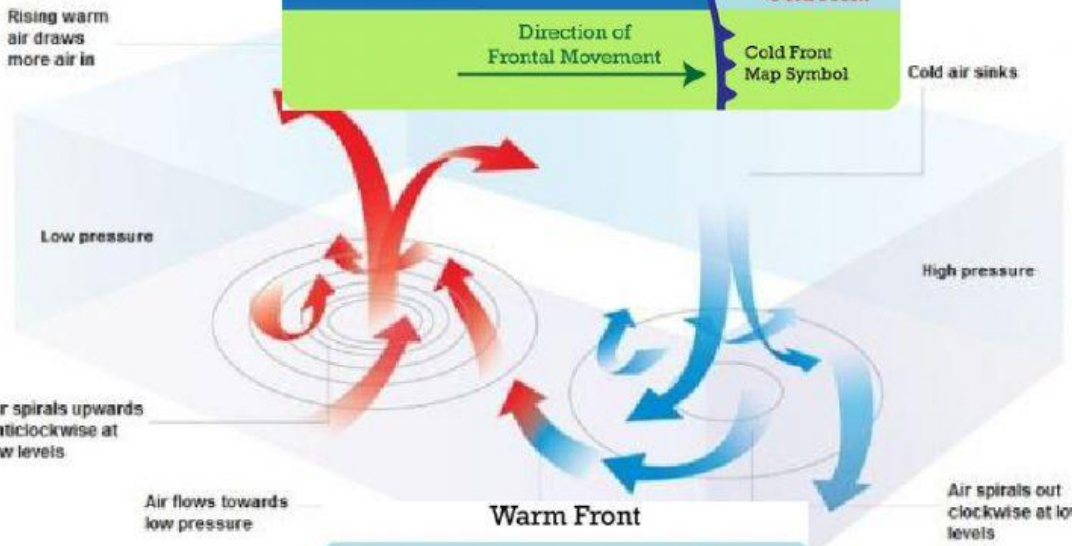
Cold Front

Warm
Front

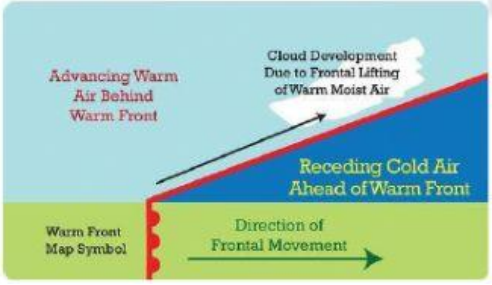


Cold Front





Warm Front

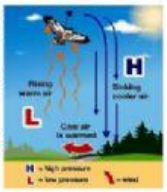


6) What are Cirrus Clouds?

- **Thin, feathery white clouds**
- **Found in high altitudes**
- **Form when the wind is strong**
- **May indicate approaching bad weather if they thicken and lower in altitude**

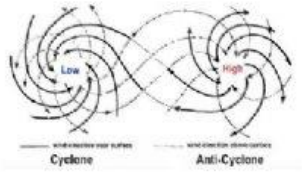
Temperature

- Heated air near a hot surface is less dense than the colder air above it.
- The heated air rises, forcing the colder air to move aside and sink toward the ground.
- Then this colder air is warmed by the surface, and it rises.
- **Wind** is created.

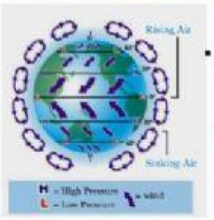


Moisture

- An air parcel with a large moisture content has the potential for that parcel to produce a great amount of precipitation.
- Air with a mixing ratio of 13 g/kg will likely rain a greater amount of water than air with a mixing ratio of 6 g/kg.

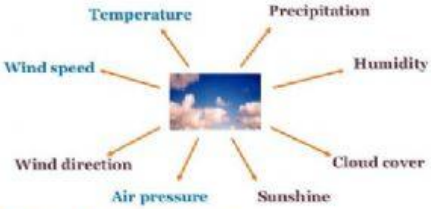


Convection cells



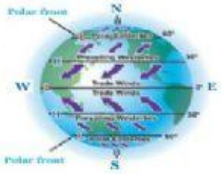
- The combination of global convection and Earth's rotation sets up a series of wind patterns called **convection cells.**

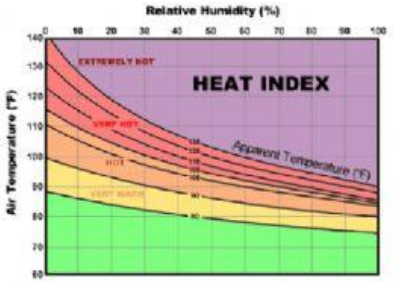
Introduction to Weather



Air and water vapor

- Three important global wind patterns exist in each hemisphere:
  - Trade winds
  - Prevailing westerlies
  - Polar easterlies



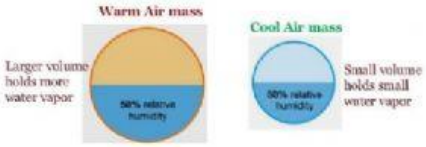


Precipitation

- Precipitation - any form of water that:
  - falls from clouds
  - reaches Earth's surface
- Types of Precipitation
  - Rain
    - Most common
    - Drops at least 0.5 mm in Diameter
    - Smaller drops are drizzle, even smaller are mist
  - Sleet
    - When raindrops fall through a layer of air below 0 C
    - Ice particles smaller than 5 mm

Relative Humidity

- **Relative humidity** is a measure of how much water vapor an air mass contains.



1. What is a front?

2. How does a cold front form?

3. What forms along a cold front?

4. How does a warm front form?

5. What type of clouds form at warm fronts?

6. What type of precipitation is produced from a warm front?

7. What is a stationary front?

8. What type of weather can occur at an occluded front?