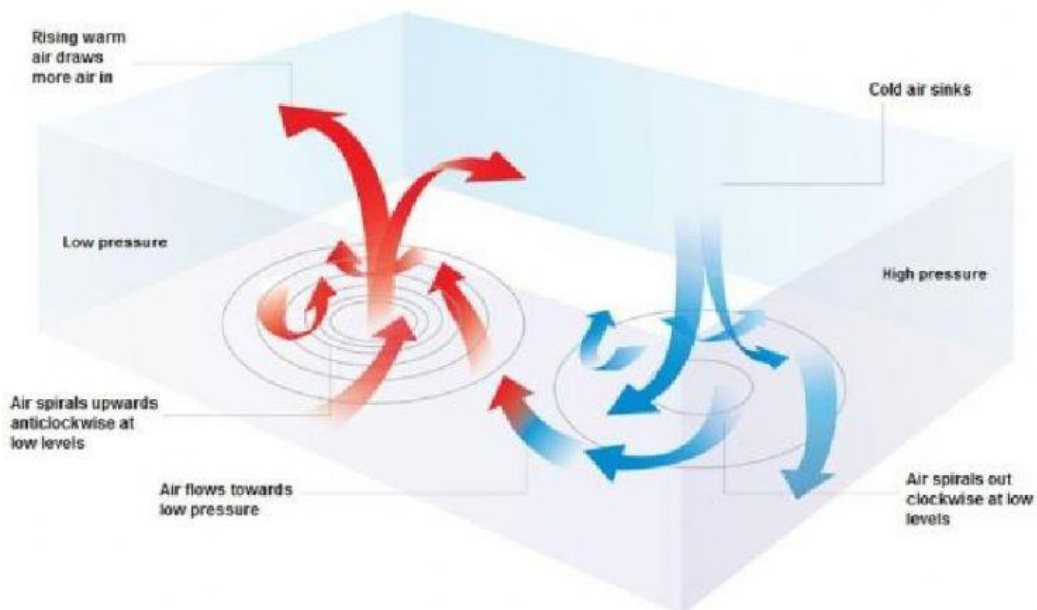
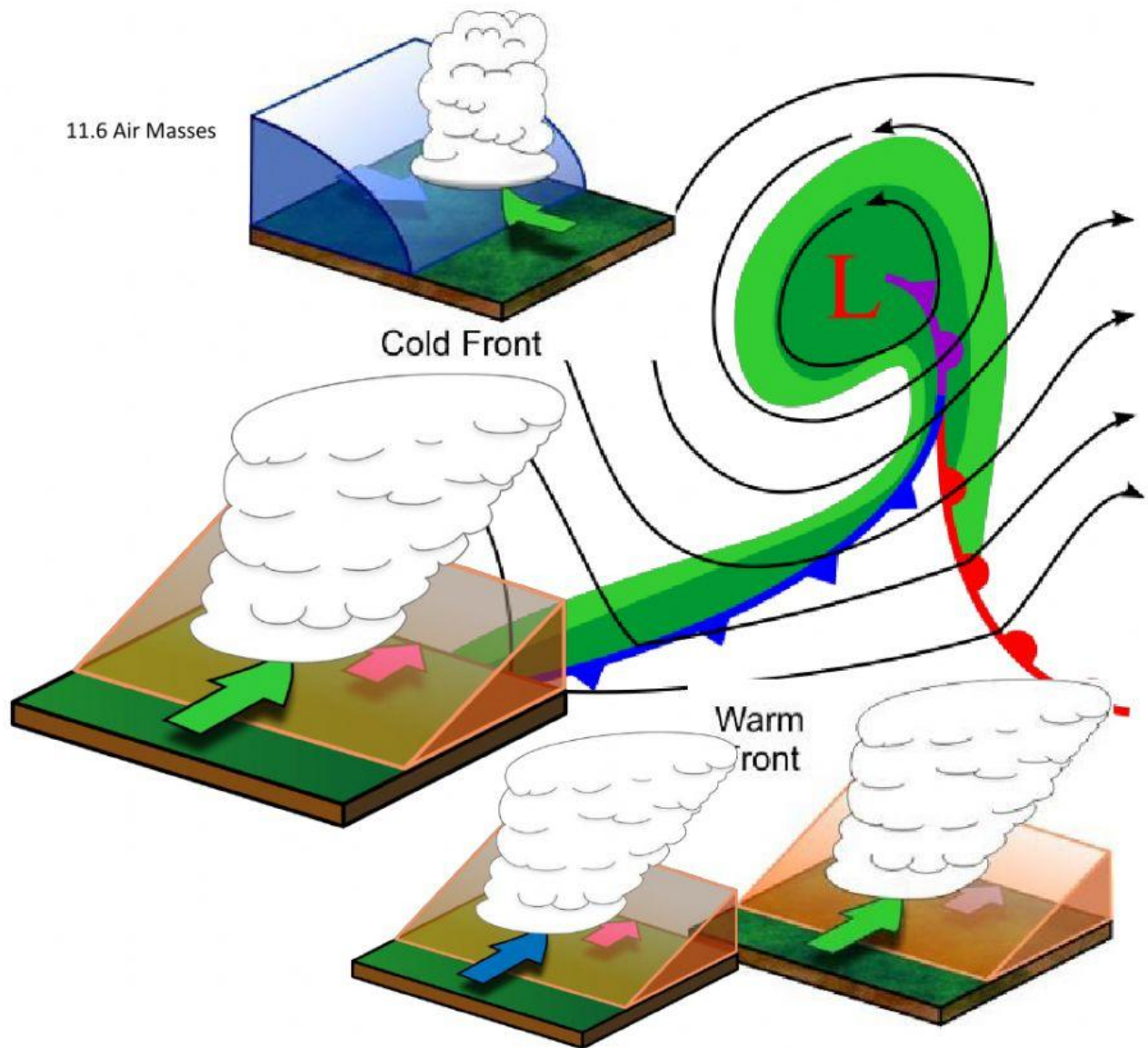


## 11.6 Air Masses



## 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

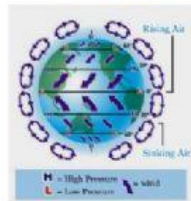


## Temperature

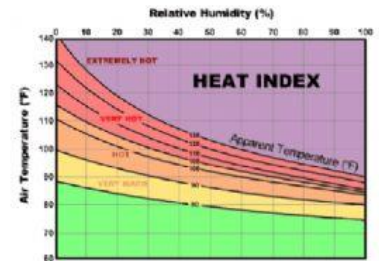
- Heated air near a hot surface is less dense than the colder air above it.
- The heated air rises, forcing the colder air to move aside and sink toward the ground.
- Then this colder air is warmed by the surface, and it rises.
- Wind is created.



## Convection cells



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



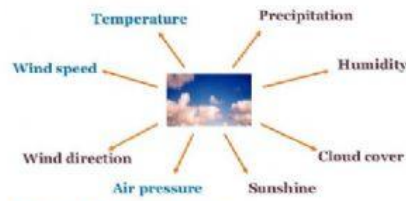
## Precipitation

- 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

## Moisture

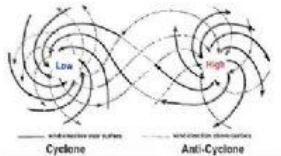
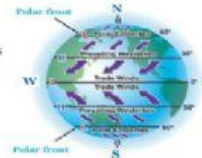
- An air parcel with a large moisture content has the potential for that parcel to produce a great amount of precipitation.
- Air with a mixing ratio of 13 g/kg will likely rain a greater amount of water than air with a mixing ratio of 6 g/kg.

## Introduction to Weather



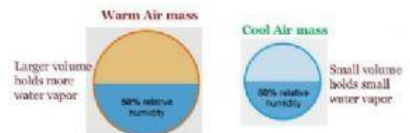
## Air and water vapor

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



## Relative Humidity

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



1. What is an air mass?

2. Why do air masses form where the air stays in one place for a while?

3. What happens when an air mass moves over a new region?