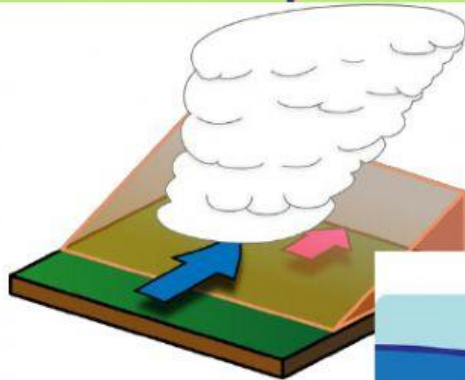
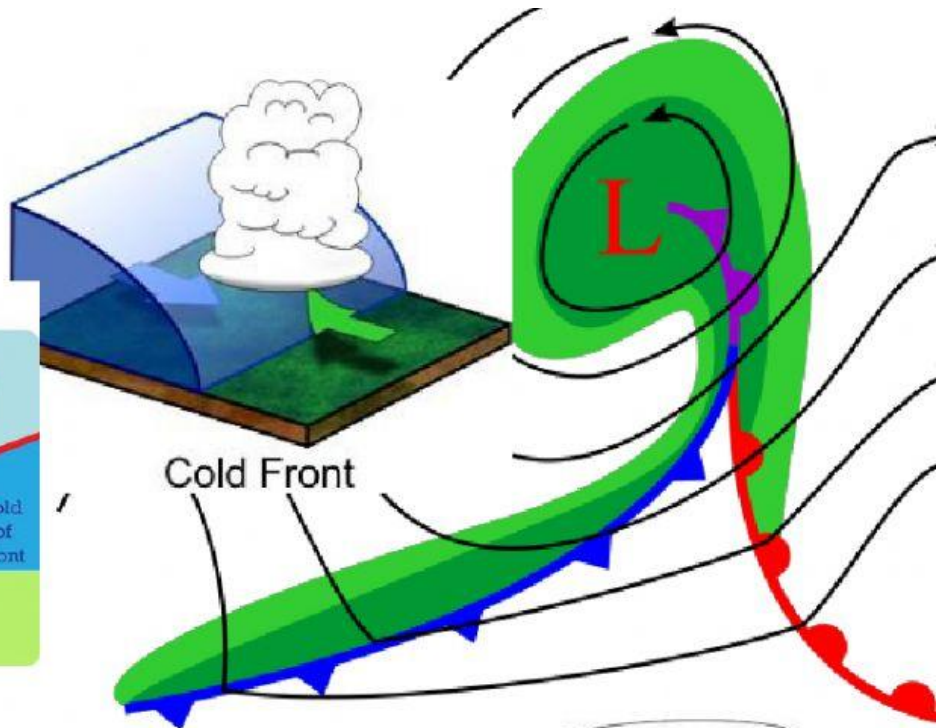
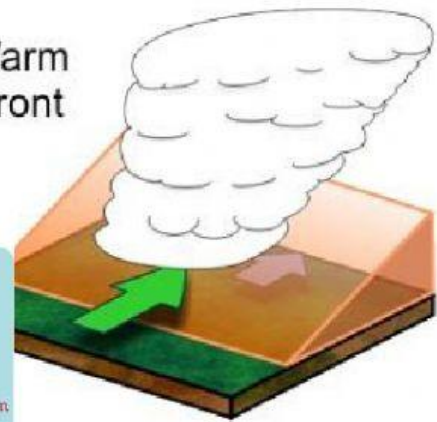
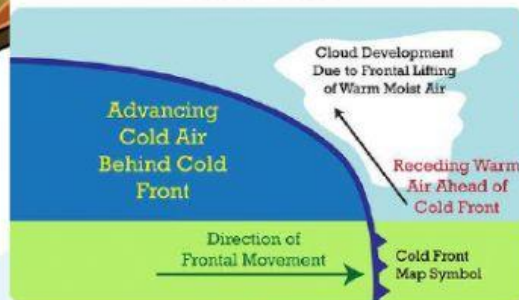


11.13 Heat Waves and Droughts

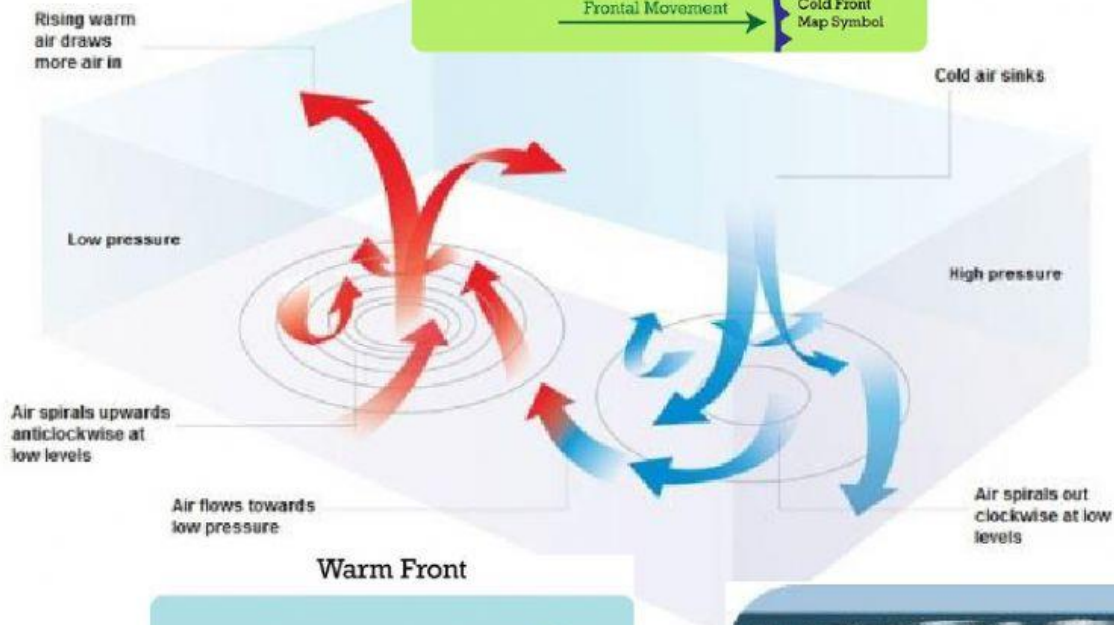
Occluded Front



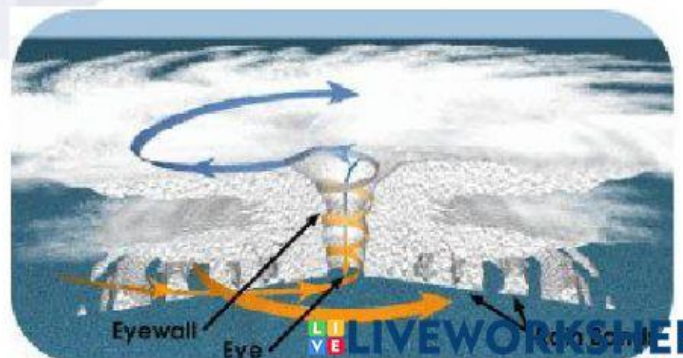
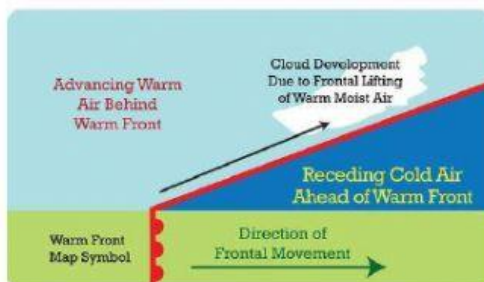
Cold Front



Warm 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

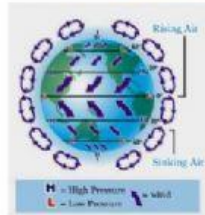


Temperature

- 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.

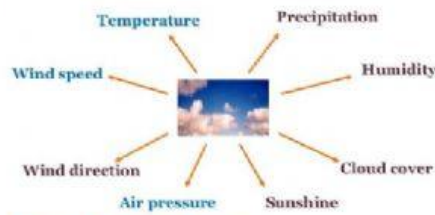


Convection cells



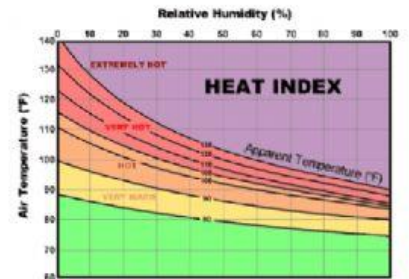
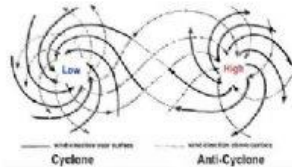
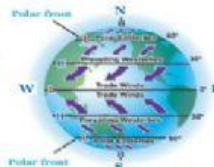
- The combination of global convection and Earth's rotation sets up a series of wind patterns called **convection cells**.

Introduction to Weather



Air and water vapor

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

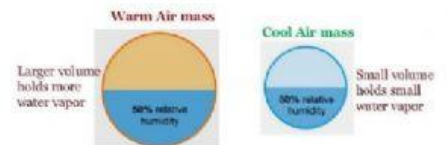


Precipitation

- 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 will happen if the world's average temperature increases by 3 degrees?
2. What will become the norm in Europe and the Mediterranean?
3. What happened in the summer of 2003?
4. How many people died in Europe that summer?
5. Why was this catastrophe, caused or exacerbated by global warming, unique?