



Climate and Weather Unit Outline

- I. Climate and Weather
 - a. Weather is the condition in the atmosphere at a specific time and place.
 - b. Climate is the average weather over a long period of time.
- II. Air Pressure and Weather
 - a. Differences in pressure drive weather.
 - b. Air Pressure
 - i. High Pressure: This is associated with calm, clear weather.
 - ii. Low Pressure: Warm air rises, cools, and precipitation forms.
 - iii. The meeting of two air masses is called a front.
- III. Weather Modeling: American vs. European
 - a. Data Assembly: Data such as wind speed, temperature, and moisture are taken into account.
 - b. Modeling weather is extremely complex because all of Earth's systems interact and influence the weather.
- IV. Earth's Systems
 - a. The Spheres
 - i. biosphere: all life
 - ii. hydrosphere: Earth's water
 - iii. geosphere: the land
 - iv. atmosphere: the air
- V. Oceans
 - a. Warming and Cooling: Water heats up and cools more slowly than land.
 - b. Currents: Cooler, denser water sinks down while warmer, less-dense water rises.