

A Global Weather Model

- Solar Energy
 - difference in heat produced by the sun's rays causes convection currents in the atmosphere
- Cloud Cover
 - cloud cover can act like a blanket and retain heat resulting in higher temps, or reflect light which would result in less heat energy absorbed and therefore cooler temps
- Earth's Rotation
 - causes winds to twist toward the right in the Northern Hemisphere and towards the left in the Southern Hemisphere
- Jet Streams
 - high speed winds travelling from west to east in the troposphere that push weather systems along
- Prevailing Winds
 - large scale winds that help maintain the energy(heat) balance of the earth. The wind patterns are very complex because of the Coriolis Effect.
- Ocean Currents
 - also help distribute heat energy from the equator to the poles because water has such a high heat capacity
- Land Masses
 - land has a lower heat capacity and therefore heats up and cools down more quickly than water. This causes shifts in wind directions locally and affects cloud formation
- The Hydrosphere
 - water has a huge influence on the Earth's weather patterns because of it's tendency to stay relatively constant temperature.

