Air masses and fronts

Moving water and air help redistribute thermal energy

Air Masses

Large volume of air that has the same characteristics, such as humidity and temp, as its source region

Source region is the area over which an air mass forms

Types of air masses

Maritime tropical air are tropical bodies of water

Continental tropical air SW US and Mexico, hot and dry

Maritime polar forms over cold water, N Atlantic and N Pacific

Continental polar forms over interior Canada and Alaska, moves southward

(Continental) Arctic forms over poles above 60\* latitude in Siberia and Arctic Basin

Impacts on Weather

Coriolis effect- fluids and objects move in apparent curved path

Wind systems

Polar Easterlies – 60\*N latitude and N Pole, 60\* S latitude ad south pole

Prevailing westerlies – 30\*-60\*N and 30\*-60\* S

Trade winds – 30\*N and equator; hurricanes

Fronts

Cold front – cold air under warm air, rain

Warm front – warm air displaces smaller cold air, light rain

Occluded front – cold/warm/cold in same direction, last cold is faster, warm up, hail

Stationary front - warm air confronts equal sized cold air, wind long light rain

Pressure

Low pressure- up, clouds and precipitation, moves inward

High pressure – clear skies, fair weather, moves outward