

Air Masses

Fronts = Boundary between air masses. Different types produce different weather patterns. Examples: Cold, Warm, Stationary, Occluded

Air Mass Movement = Move with the global pattern of winds. In US from west to east with the jet stream.

Characteristics = Depends on the region that the air mass comes from. Each category is named for moisture and temperature.

Air Mass = Large volume of air in which temperature and humidity are nearly the same in different locations at the same altitude.

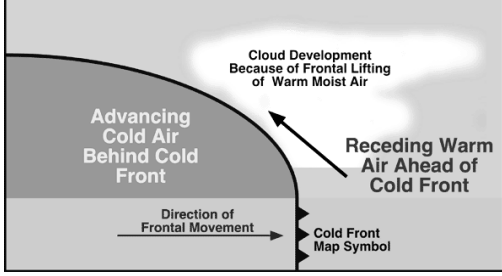
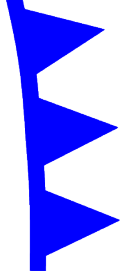
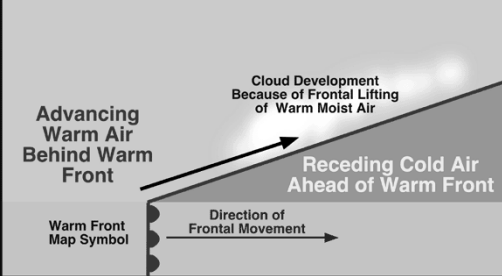

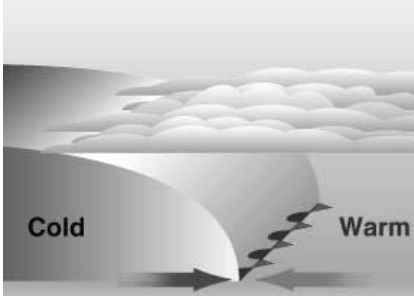
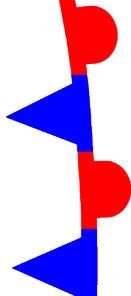
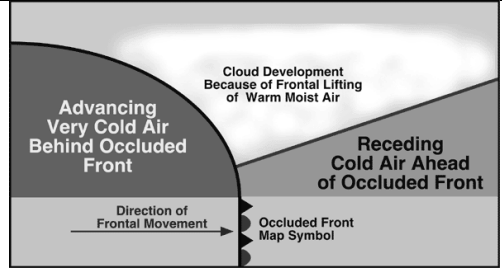



Formed when air sits in one place for many days and takes on the characteristics of the land or water below it

Types = Maritime Polar - Moist, Cool
Maritime Tropical - Moist, Warm
Continental Polar - Dry, Cool
Continental Tropical - Dry, Warm

Air Masses affecting U.S. = Maritime polar in North West and North East. Continental Polar in Mid North. Maritime tropical in the South West and South East. Continental tropical in the Mid South

Temperature and density = Warm air is less dense than cool air and rises above the cool air this usually causes clouds to occur

Fronts and Pressure Systems

Air Mass	Illustration	Draw/Color the Map Symbol	Type of Weather it Causes
Cold Front			<p>Cold air mass pushes a warm air mass and forces air to rise. Forms tall cumulonimbus clouds with precipitation of brief heavy storms. After the storms, the air is cooler and clear.</p>
Warm Front			<p>Warm air mass pushes a cold air mass and rises slowly over the cold air. Forms cirrus, stratus clouds with hours of steady rain or snow. After the rain, the air is warmer.</p>
Stationary Front			<p>Two air masses push against each other without moving. Becomes a warm or cold front when one air mass advances. Produces clouds that cover the sky for days.</p>
Occluded Front			<p>A wide variety of weather can be found along an occluded front, with thunderstorms possible. Additionally, cold funnel clouds are possible, small isolated occluded fronts often remain for a time creating cloudy conditions with patchy rain or showers.</p>
Low Pressure			<p>Air moves inward and upward counterclockwise. Causes storms.</p>
High Pressure			<p>Air moves outward and downward clockwise. Causes sunny skies and calm gentle breezes.</p>