

## Air Masses & Fronts

### What happens when air masses meet?

- Air masses don't mix easily.
- The line between air masses is called a front.

The warmer air is less dense, and is forced to rise.

This results in unstable conditions and precipitation.

## COLD FRONTS

Cold Air pushes under warm air

Warm Air rises and cools

Cumulus and Cumulonimbus Clouds Form

Cold Front Map Symbol

## Cold Front

Cold air meets and pushes out warmer air.

- Rain falls ON the front.
- Short period of heavy rain / storms

## WARM FRONTS

Warm Air pushes above cold air

Cold Air retards

Stratus clouds form when warm air cools

Warm Front Map Symbol

## Warm Front

Warm air meets and rises over colder air.

- Rain falls AHEAD OF the front.
- Gentle rain for a long period of time.

## Occluded Front

When a cold front overtakes a warm front.

- Long period of gentle rain followed by heavy rain / storm

Colder Drier Air Mass

Warm Moist Air Mass

Coil Air in Place

Occluded Front

Cold Front

Warm Front

## Stationary Front

Two air masses remain in the same positions.

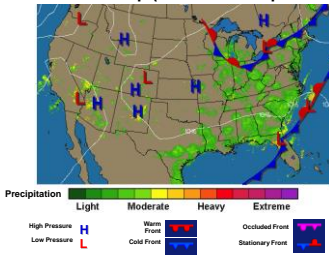
Cold Air

Warm Air

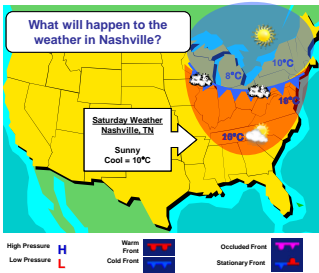
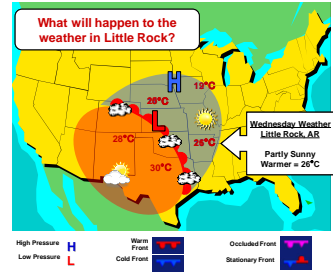
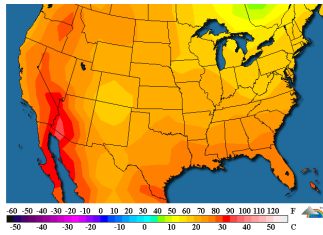
### Possible Weather Associated with Fronts

Front	Type of Weather Associated
Cold Front	Clouds Storms with heavy precipitation
Warm Front	Clouds Light Precipitation
Stationary Front	Clouds Precipitation
Occluded Front	Clouds Precipitation

Surface Map (Fronts & Precipitation)



Temperature Map



**How does warm front differ from cold front?**

In the warm front, the warm air mass move up over the cold mass; In the cold front, the cold air mass move beneath the warm air mass.

**How does stationary front differ from both warm and cold front?**

In the stationary front, neither the cold air mass nor the warm air mass has enough force to move the other, so the front does not move. Warm and cold fronts do move.

**If it is cloudy outside or if there is precipitation, what can you assume is happening?**

A front must be passing through the area.

**Foldable Fronts Directions**

Check out the teacher's example if you need help

- Fold your paper in half – hot dog style
- Divide your paper into four sections and cut the top sheet only!
- Write the four types of fronts on the outside flap and make it colorful
- On the inside left, draw a picture of the front (add some color to the picture)
- On the inside right, include the following information:
  - Definition
  - Symbol
  - Type of weather associated with the front

**Fronts Foldable**

