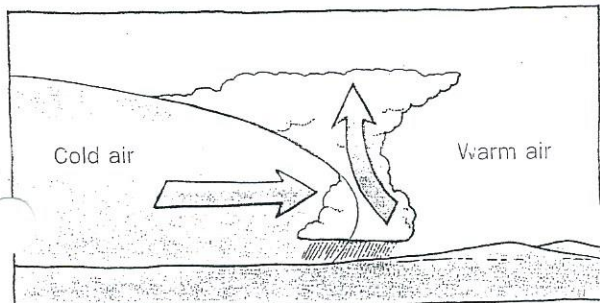


WEATHER FRONTS

Have you ever heard your local weather forecaster talk about “weather fronts”? Fronts bring changes in the weather. They occur when air masses of different temperature, pressure, and humidity conditions collide. A weather front forms along this boundary between different air masses.

There are several different types of fronts. A cold front is the leading edge of a moving mass of cold air. When a cold air mass pushes a warm air mass ahead of it, the dense, cold air slides under the light, warm air. The warm air gets

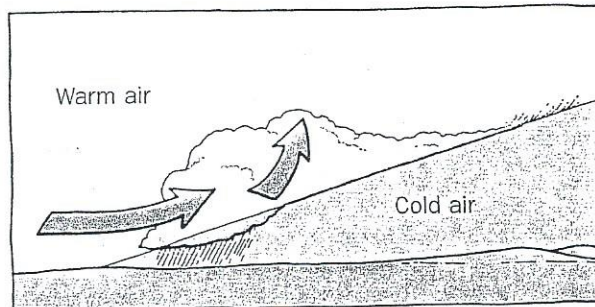


Cold front

pushed upward, which causes thunderstorms. If there is a lot of water vapor in the rising warm air, dense clouds form, and rain or snow may fall. If there is little water vapor, only clouds form. Cold fronts frequently move fast and cause abrupt changes in weather, including violent thunderstorms or tornadoes. After a cold front passes, cool, dry air moves in.

At a warm front, a moving, warm air mass overrides a cold air mass ahead of it. The warm air is less dense, so it rises above the cold air. If the warm air is dry, scattered clouds form. If the warm air is humid, rain (or light rain or snow in the winter) normally falls along the front. Warm fronts typically move slowly, so rainy weather usually stays around for days.

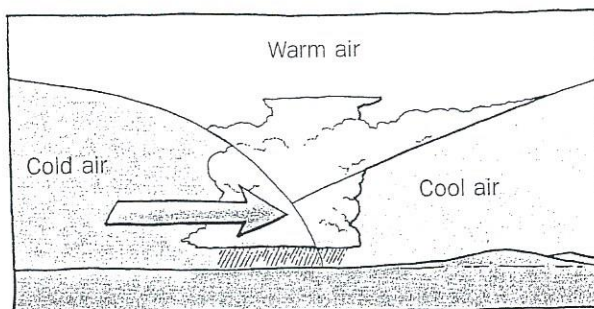
If two air masses move close to one another but neither has enough force to move the other, they both remain fixed in place. The boundary between them is called a stationary front. At



Warm front

the point where the warm air and cold air meet, water vapor in the warm air condenses into rain, snow, fog, or clouds. If the stationary front remains in place for a long time, it may bring days of clouds and precipitation.

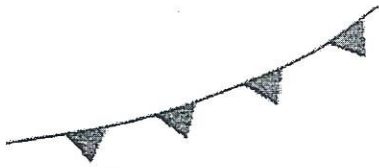
In a more complex frontal system—an occluded front—both a cold and a cool air mass collide with a warm air mass, which becomes trapped in the center. The warm air mass is lifted upward. It is cut off, or occluded, from the ground. As the warm air cools, its water vapor condenses. Then the weather may bring clouds and rain or snow.



Occluded front

When you listen to weather forecasts from now on, pay close attention to what the forecaster says about fronts. Do you notice that one type of front tends to form in your area more than others? What type of weather and cloud cover does each front bring? The appearance of clouds will often tell you a lot about the way air is circulating in each frontal system. □

Fronts



Describe which direction the front is moving when the symbol above is used on a weather map.

Illustrate what happens with the air masses during this type of front.

Describe the type of weather associated with this type of front.

Type of Front:



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