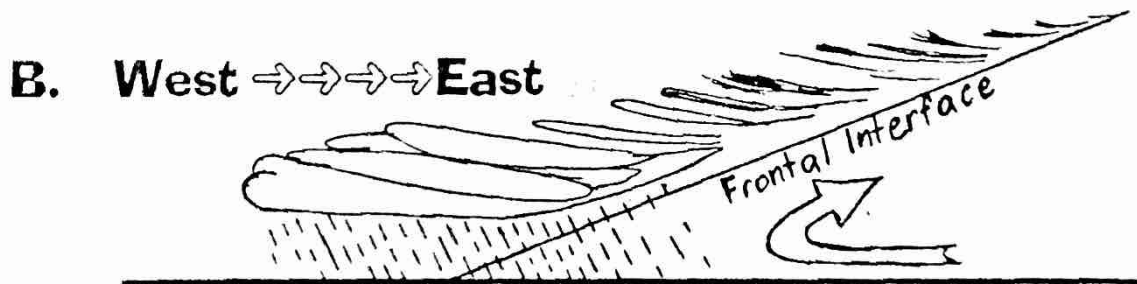
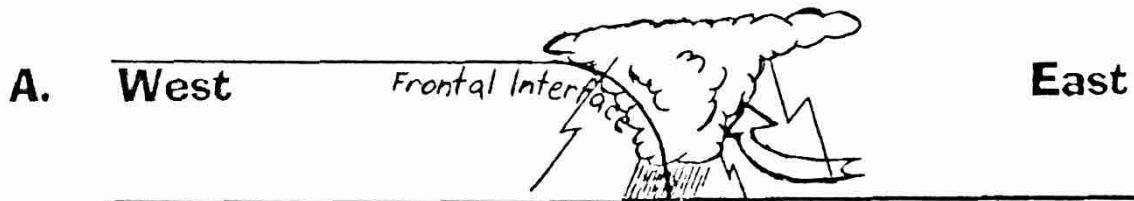




Name _____

Fronts – Hot or Not?

A **Cold Front** is the leading edge of a quickly advancing (~30 mph) cold air mass that is moving under and displacing the warmer air in its path. Since cold air is denser than warm air, it is the “bully” and forces warm air to rise quickly ahead of it.

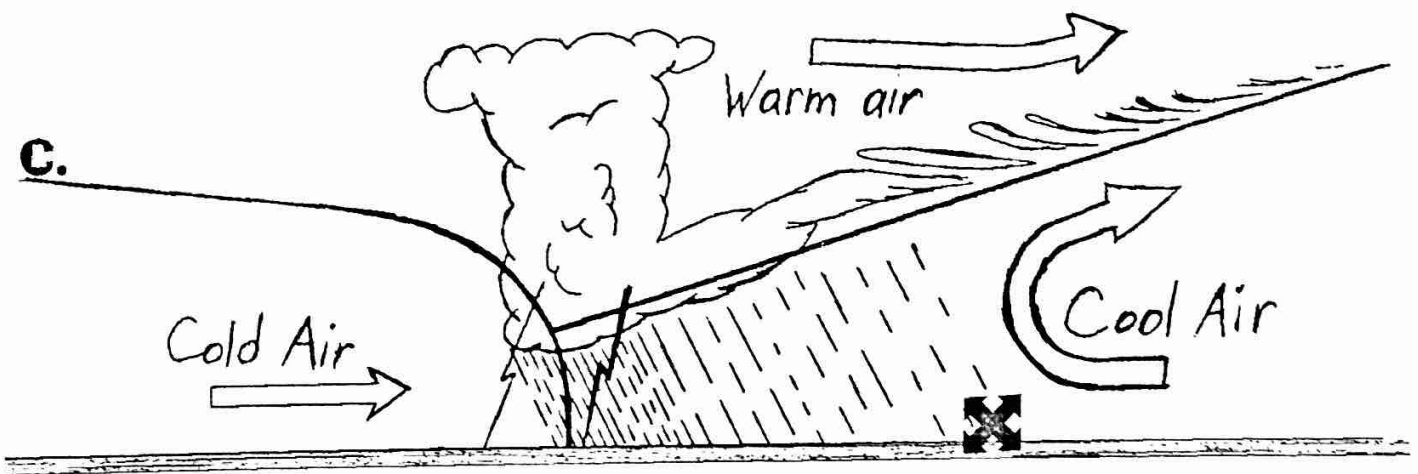
A **Warm Front** is the leading edge of a slowly advancing (~15 mph) warm air mass that is rising up and over a retreating relatively colder air mass. Since the cold air is more stubborn (denser), the warm air is not able to push it out of its path as easily.



1. Which diagram shows a cold front? 1. _____
2. Which diagram shows a warm front? 2. _____
3. Which diagram would have a symbol like this:  3. _____
4. Which diagram would have a symbol like this:  4. _____
5. Which diagram shows cumulonimbus type clouds? 5. _____
6. Which diagram shows cloud cover over the greatest number of miles on Earth's surface? 6. _____
7. Which front would have more hours of precipitation? 7. _____
8. At which front would you be more likely to find a thunderstorm (and/or squall line)? 8. _____
9. In which front would you be more likely to find a sudden change in wind direction? 9. _____

A **Stationary Front** is the boundary between two air masses that are not moving (or moving less than 6 mph) because both air masses aren't strong enough to replace the other. This can also happen if two air masses are sliding past each other in parallel paths and the boundary between them is not moving. As a result, this condition can last for days until it eventually becomes a warm front, cold front, or dissipates.

An **Occluded Front** occurs when a cold front catches up with a warm front. It develops when three different air masses come together – a warm air mass is pinched between a cold and a cool air mass. The warm air mass is lifted completely off the ground.



10. According to the definitions above, Diagram C represents the weather conditions associated with what kind of front? Explain your reasoning. Draw the symbol for this front as well.

11. Picture yourself at Location X in Diagram C.

a) Describe what will happen to the temperature as the front moves toward you, and then past you as it moves west. Explain your reasoning.

b) Describe what will happen to the pressure as the front moves toward you, and then past you as it moves west. Explain your reasoning.