Weather Study Guide

Fill in the blank.

Weather is constantly **<u>changing</u>**. It is measured using different instruments.

A **meteorologist** forecasts or predicts the weather using data collected from these instruments.

Air moves from $\underline{high}(H)$ to $\underline{low}(L)$ pressure creating \underline{winds} .

Match with the correct word/picture pair.

- An **<u>anemometer</u>** measures wind speed.
- A <u>thermometer</u> measures temperature.
- A **barometer** measures air pressure.
- A **wind vane** measures wind direction.

Complete the tree map on clouds.

A rain gauge measures amount of precipitation.



gray

r			
<u>cirrus</u>	<u>cumulus</u> I	<u>stratus</u>	<u>nimbus</u> I
<u>thin</u>	puffy	<u>flat</u>	joins other clouds
Wisp of hair	White, fluffy	Gray sheet	Precipitation
Ice crystals	"cotton"	Fog/low	Cumulonimbus =
High in sky	Nice/fair weather	drizzle	thunderstorms

Cloud Types









Complete the Water Cycle flow map.



Condensation

water cools off and sticks together to form clouds





Runoff

evaporation

water is heated and forms water vapor (water is in gas form)



precipitation

a cloud becomes saturated and must let the water go, temperature determines the type





collection

water runs-off of landforms or seeps through the ground, into streams, rivers. lakes. oceans



The **sun**'s energy is the driving force of the water cycle.

<u>Transpiration</u> is the evaporation of water that has come through the leaves of plants.

Fronts are boundaries between 2 <u>air</u> <u>masses</u> different temperature.

When these air masses have different temperatures and cause a front, **<u>thunderstorms</u>** often occur.



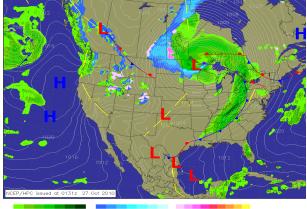
Cold fronts occur when **cold** air replaces warmer air and often

Produce severe weather.



Warm fronts occur when <u>warm</u> air replaces cooler air and often brings fog.

Analysis valid 0000 UTC Wed 27 Oct 2010



Rain Snow Wintry mix

Using the weather map, answer the questions.

What area is currently in a Low pressure system?

Midwest of US, west of Canada, East in Mexico, Gulf of Mexico

What area is getting the most precipitation?

West of NC and up through Canada, above Great Lakes

Why is there a cold front at the leading edge of the rain moving into North Carolina?

Because a cold front brings storms where the cold air takes place of warm air

Causes convection—big temperature difference