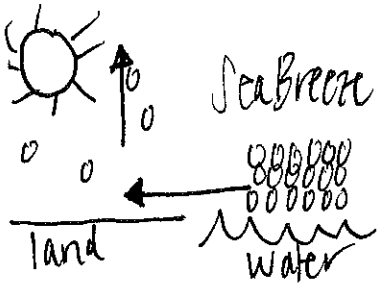
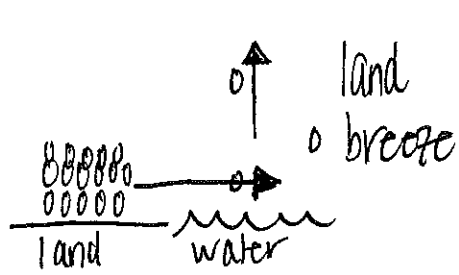




4. What is meant by the specific heat of a substance? Which has a higher specific heat-water or land? How does the specific heat of water & land affect local weather patterns? specific heat is a numeric value showing how much heat has to be gained or lost to change the temperature of a certain material.
Land has a low specific heat & water has an ~~extremely high~~ specific heat

5.

exosphere - outer layer. very little matter
thermosphere - hot contains ionosphere
mesosphere - meteors burn up
stratosphere - ozone layer - blocks UV
troposphere - all life & weather
Earth

Label the layers of the atmosphere & indicate one important fact about ea. layer. Which layer contains the ozone layer?

6. How is man affecting the ozone layer? What is the greenhouse effect? Which layers are involved in the greenhouse effect? Which gas/gases contribute to the greenhouse effect?
Man was using too many products containing CFC's. CFC's depleate ozone.
Greenhouse effect is the heating of the Earth's surface due to the atmosphere acting like a blanket trapping in heat. Greenhouse gases, namely CO_2, are becoming too concentrated in atmosphere & trapping in too much heat.

7. What is a hurricane? How does it form? What symbol to weather forecasters use to indicate a hurricane?
a tropical storm that originates in warm ocean water - moisture from ocean combines with heat energy to move hurricane - wind patterns near the ocean surface must spiral the winds inward

8. Why do we have weather on Earth? What role does radiation play in the different kinds of weather on Earth?
Sun → thermal energy → radiation → heats Earth unevenly → b/c of temperature differences on Earth (cold @ poles + warm @ equator) we get global & local convection currents (wind & ocean currents). In addition, radiation from the sun heats H_2O on planet causing evaporation, cooling causes condensation & precipitation.

9. What is the jet stream? Where is it located?
global wind current - high in atmosphere - moves west to east across U.S.

10. What are the factors that influence weather?
water cycle
sun
altitude
latitude
uneven htg.
topography
distance from a large body of water

Study Guide – Global Patterns Test Name Key Per_____

1. Vocabulary – define the following:

Front - a boundary separating 2 air masses of different densities & temperatures

Climate - the average weather over a time period

Weather - current local conditions

Convection currents - heat transfer through a fluid (liquid or gas) heated particles rise & cooler particles sink creating a circular cycle

Sea Breeze - local breeze - occurs during daytime - land/sand heats up more than water - the air above the land heats up & rises - the cool/dense air over the water rushes in to replace the air above the land

Land Breeze - occurs @ night - water is warmer than land - so the convection currents change directions & cool air rushes out from the land to the sea

Anemometer - an instrument that measures wind speed

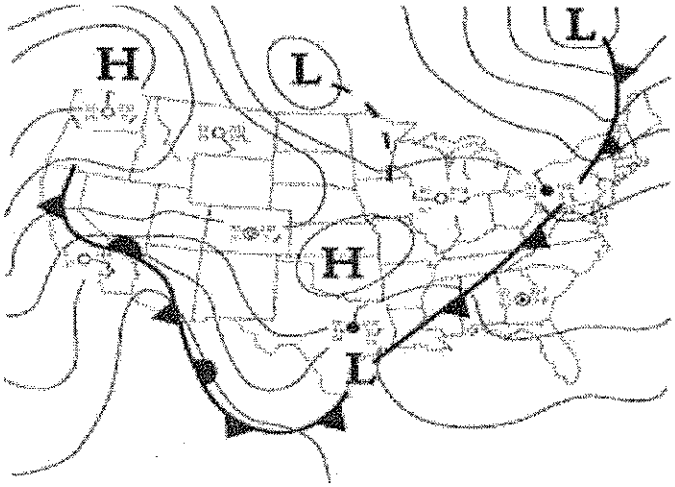
Barometer - an instrument that measures air pressure

Sling Psychrometer - an instrument that measures humidity in the air

Thermometer - an instrument that measures the kinetic energy of particles

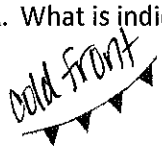
Wind - convection currents in the air - maybe global or local (due to uneven heating)

2.



Using the map to the left, answer the following questions:

A. What is indicated by these symbols



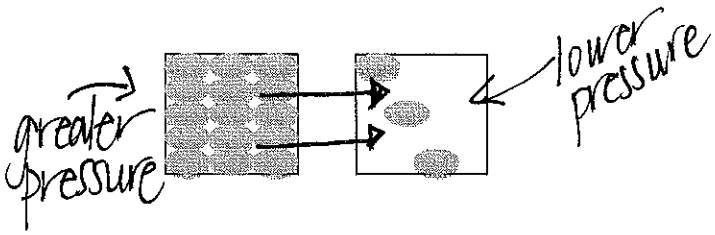
B. The capital H and capital L indicate high and low pressure systems. What kind of weather is the northern part of Texas experiencing? sunny - happy weather

C. What kind of weather will Florida be experiencing in a day or two? colder w/ thunderstorms

D. What kind of weather is associated with a low pressure system? A high pressure system?

lousy weather - clouds precipitation

happy weather - sunny



3. Draw an arrow to show the movement of the molecules. Explain why you believe the molecules move this way. If the wind was moving, in which direction would it move? Explain your answer. Which box exhibits greater pressure? particles (atoms/molecules) move from high concentration (dense) to low concentration (less dense). If wind was moving it would be west to east in the diagram above