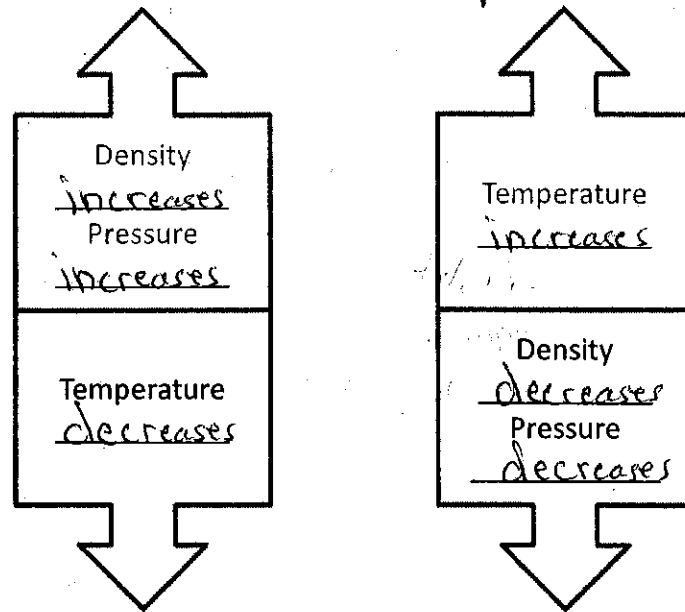


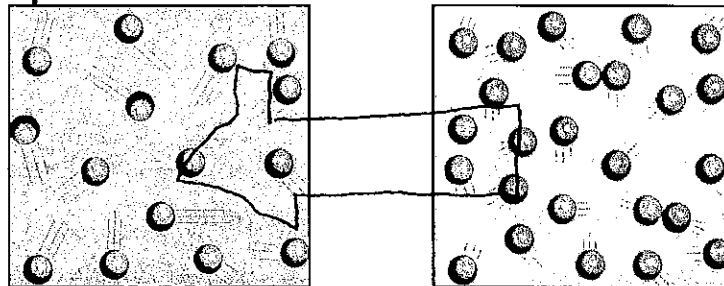
# Wind Movement Notes

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

1. Explain why there is uneven heating on the Earth's surface. The Earth is tilted on its axis as it revolves around the sun causing the sun to hit the earth at different angles.
2. The uneven heating of land forms wind systems.
3. What causes wind? differences in air pressure
4. Fill in the diagrams



5. Fill in the information in the diagrams below for temperature, density, and pressure. Draw an arrow to represent the direction in which the wind would blow. Why would the wind blow in that direction? Areas of high pressure move to areas of low pressure.



Higher Temperature  
Lower Density  
Lower Pressure

Lower Temperature  
Higher Density  
Higher Pressure

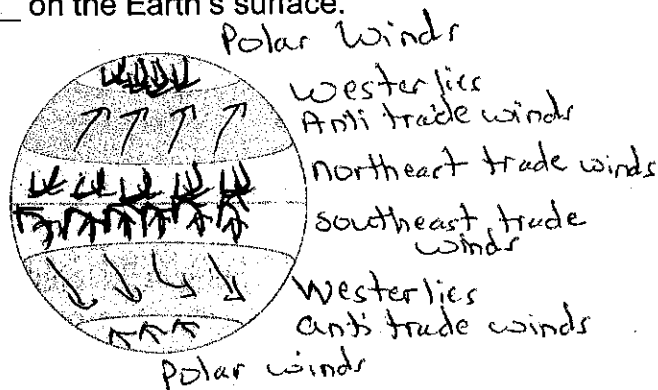
6. Describe which areas of the earth's surface have air that is low pressure (low density). Why does the air in this area have low pressure (low density)? Equator because the sun strikes the earth directly.
7. Describe which areas of the earth's surface have air that is high pressure (high density). Why does the air in this area have high pressure (high density)? Poles because the sun strikes the earth at a low angle causing lower temperatures.

# Wind Movement Notes

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

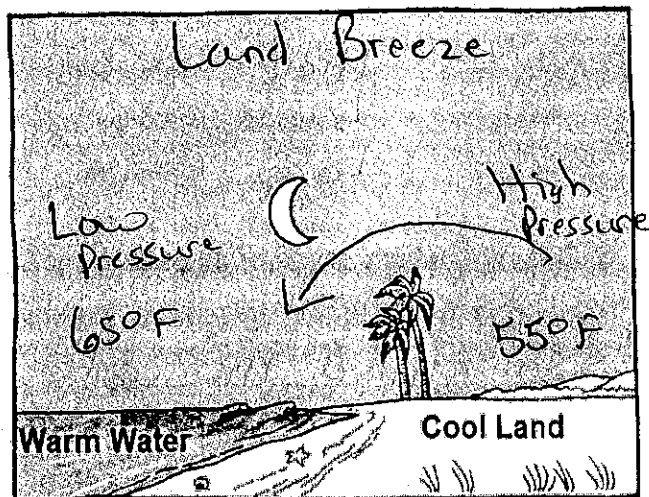
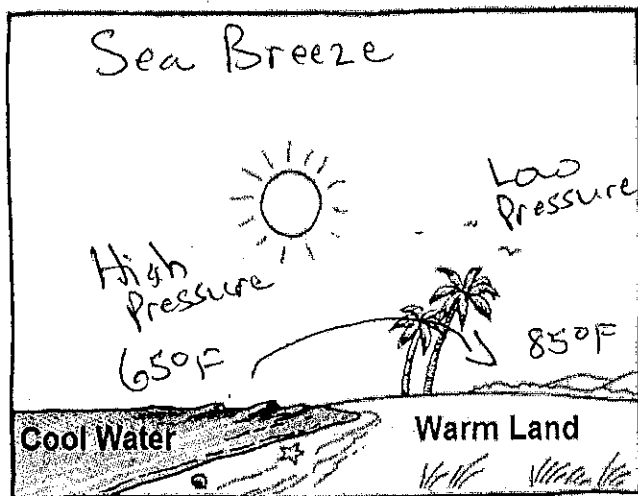
8. Differences in density and air pressure cause wind and air movement.
9. What is a convection current? the transfer of heat by the circulation of the heated parts of a liquid or gas.
10. Describe an example of a convection current. Boiling water - the hottest water comes to the top and then sinks as it cools.
11. How does air move in a convection current? Warm air rises; cool air sinks
12. Large convection currents are formed because of the temperature differences. This produces global wind systems.
13. How does the rotation of the Earth affect winds? The Coriolis Effect causes wind to curve to the right in the Northern hemisphere and to the left in the Southern hemisphere.
14. The flow of air caused by unequal heating of Earth's surface and the rotation of the Earth creates distinct wind patterns on the Earth's surface.

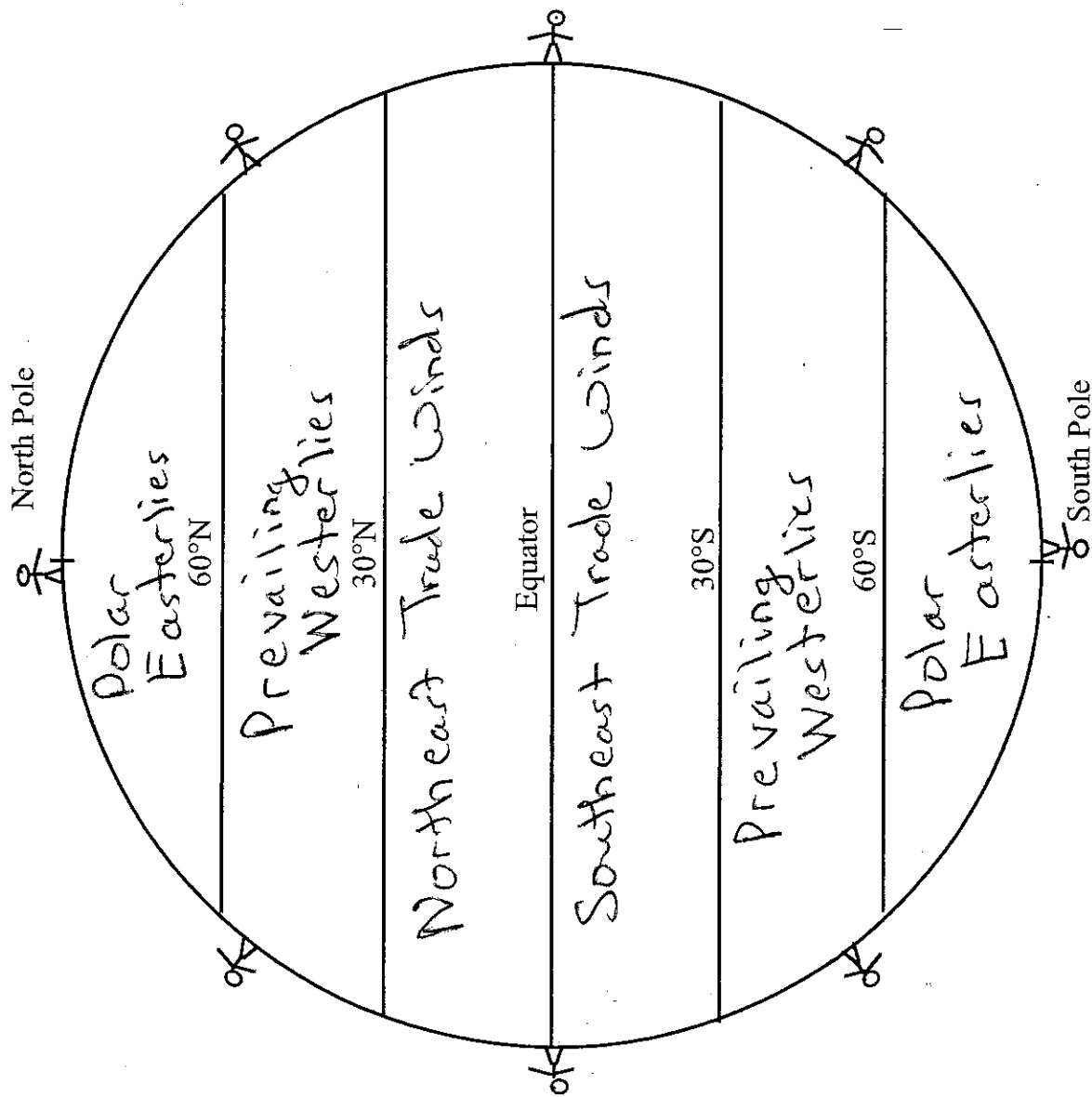
15. Draw arrows in the diagram illustrating how the rotation of the Earth affects global wind patterns.



16. Global wind systems determine the major weather patterns for the entire planet. Smaller wind systems affect local weather. Two such wind systems are sea breezes and land breezes.

17. Label and draw the following in the diagrams below: sea breeze, land breeze, high pressure, low pressure, arrows showing the direction of the wind.





## Polar Easterlies

Blows cold air away from the poles. They are found between 60 degrees and 90 degrees latitude. They blow east to west.

## Prevailing Westerlies

They blow from west to east between 30 degrees and 60 degrees latitude.

## Sea Breeze

Blows from the cool water to the warm land.

## Land Breeze

Blows from the cool land to the warm water.

## Coriolis Effect

Causes winds to curve to the right in the Northern Hemisphere and the left in the Southern Hemisphere.

## Trade Winds

Winds that blow from east to west from 30 degrees to 0 degrees latitude. They blow from the horse latitudes to the equator.