

Name: _____
Mr. Willis
Conceptual Physics: _____
Date: _____

Unit XI
Meteorology
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XI

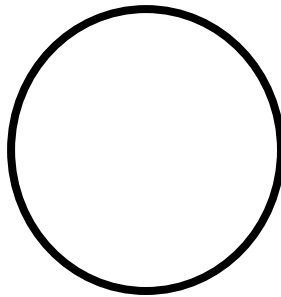
Origins of Wind and Pressure

Objective: To understand how the wind is caused by the sun and rotation of the Earth.

Basic Concepts of Wind:

- The sun warms the air during the daytime causing it to _____.
- As the warm air rises it eventually cools and falls back to _____.

Winds on a non-rotating Earth:

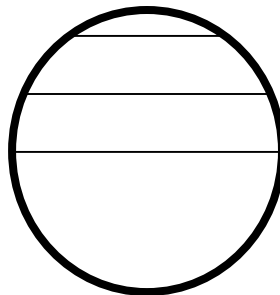


Latitude Wind Cells:

S.P. 60 30 0 30 60 N.P.

Label the Equator

Pressure Belts and Wind:



Jet Stream

A narrow stream of air in the upper _____.
Moves eastward at a _____.

How Winds Begin:

Breezes (note: _____.)

Sea Breeze:

Land Breeze:

Vertical Wind Profile:

Questions: (Answer each question by reading over the lecture notes.)

1. Examine your diagram for winds on a Non-Rotating Earth.
 - a. What warms the air around the Equator of the Earth? _____
 - b. Why does the air fall back to Earth near the poles? _____
2. Examine the diagram for Latitude Wind Cells.
 - a. Is the air rising or falling over the Equator? _____
 - b. Is air rising or falling over the North pole? _____
 - c. Why is the air falling over the South pole? _____
3. Examine the diagram for Pressure Belts and Wind:
 - a. Which region has very little wind? _____
 - b. Our wind is from the southwest. Which region describes Missouri? _____
4. Examine the diagram for How Winds Begin. How is vertical air movement and pressure related to the origin of wind? _____