

I. What is Wind?

A. Wind –

A. 1. Winds are caused by differences in air pressure.

B. Measuring Wind

1. Wind is given a speed and direction.

2. The direction

3. The device is called a wind vane.

4. Wind speed is measured with an \_\_\_\_\_.

C. Wind-Chill Factor

1. Wind removes heat as it moves over the skin.

II. Local Winds

A. They are winds that blow over a short distance.

B. They are caused

C. Will form when large-scale winds are weak.

D. Two types of local winds:

1. Sea Breeze -

2. Land Breeze - at night, the air above water is warmer than that above land so the air moves from land towards water.

III. Global Winds

A. They are caused by unequal heating of the Earth, just like local winds, but they cover a large area.

B. The Global Convection Currents are

C. Coriolis Effect - because the Earth rotates from west to east, it makes the wind appear to turn as it travels from the poles to the equator.

#### IV. Global Wind Belts

A. The Coriolis Effect and other factors make areas of winds and calm across the Earth.

B. The calm areas are the doldrums and the horse latitudes.

C. The wind belts include the trade winds, the polar easterlies, and the prevailing westerlies.

D. Doldrums -

E. Horse latitudes - the warm air that leaves the equator moves both north and south till about the 30 degree latitude. Here it cools and sinks creating a calm area.

F. Trade Winds - cool air moving from the horse latitudes towards the equator creates strong winds. These were used by sailing ships for trade, hence the name Trade Winds.

1. Due to

G. Prevailing Westerlies –

1. This plays an important part for the U.S. weather.

H. Polar Easterlies - cold air moving from the poles to the 60 degree latitude lines follows the same direction as the trade winds.

1. The polar front

I. Jet Stream -