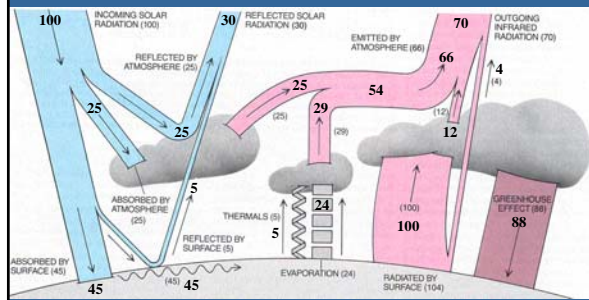
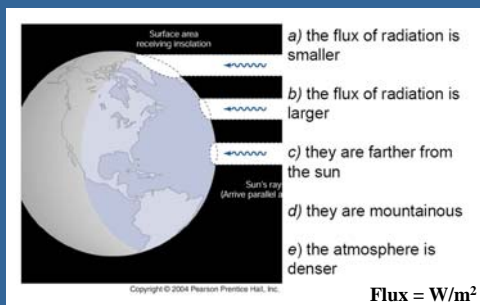


Energy Budget for Earth

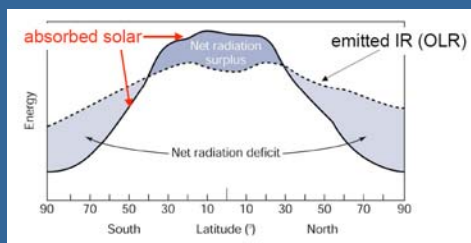


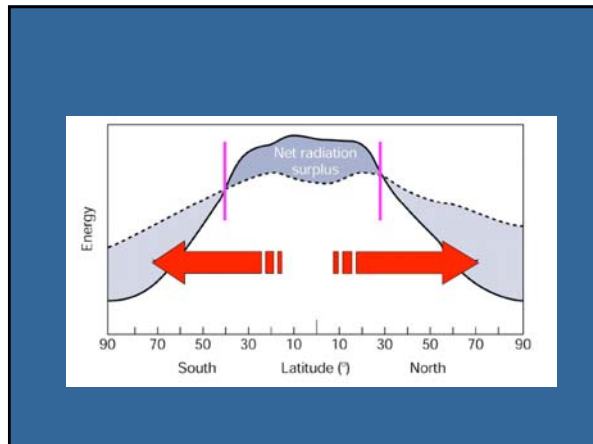
Notes:
The total E absorbed by Earth & Atmosphere (70 %) powers processes on Earth.
Units are % of incoming solar radiation entering the top of the atmosphere.

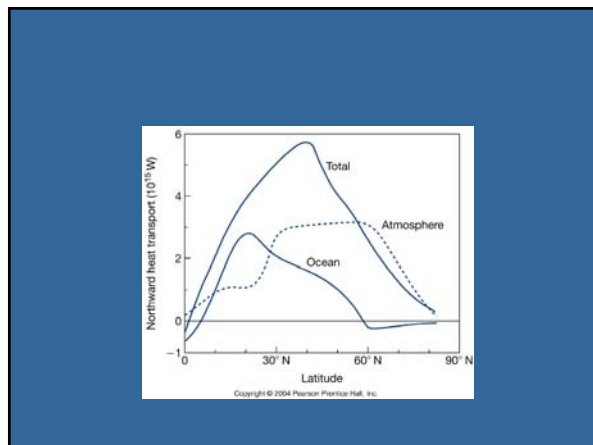
Why are the poles colder than the tropics?

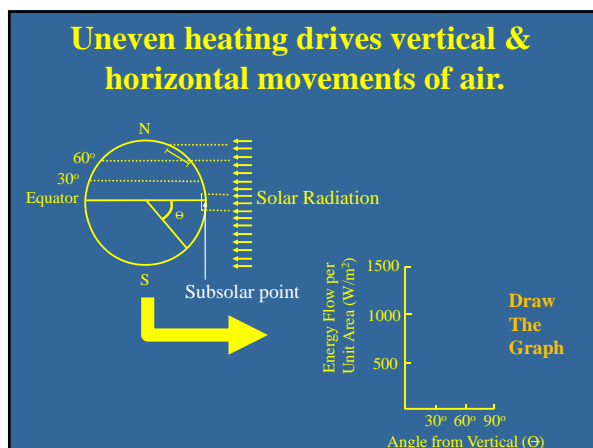


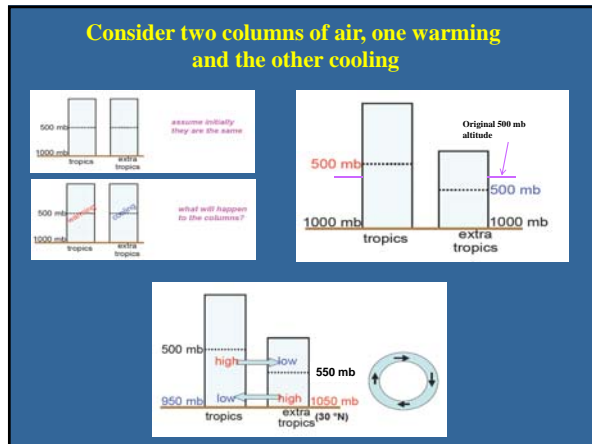
$$\text{Flux} = W/m^2$$

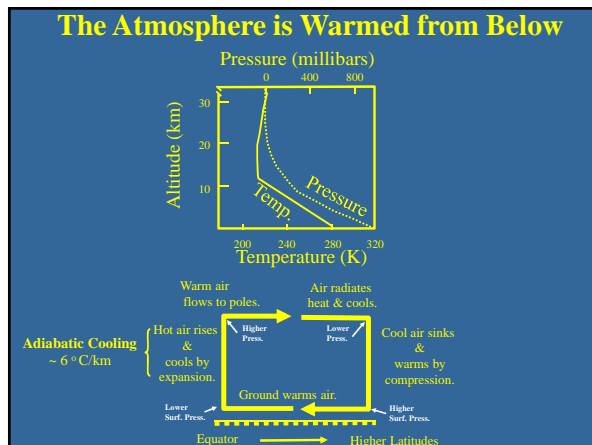










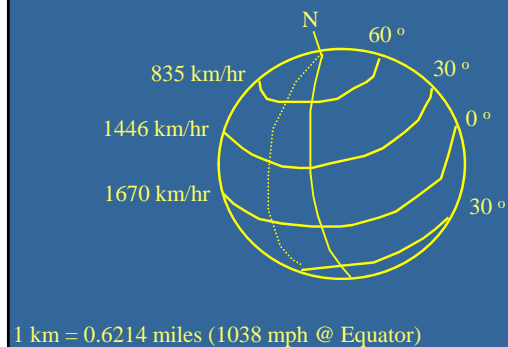


Coriolis Effect

Apparent curvature in the direction of travel of a body moving over a spinning object.

For winds and ocean currents, it's caused by latitudinal differences in the rotational speed of Earth.

Latitudinal differences in rotational speed

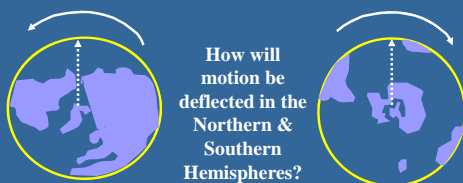


Understanding the Coriolis Effect

What would happen if you try drawing a straight line on a spinning record?



Earth rotates out from under objects in motion over its surface creating a curved path for observers on the surface.



Northern Hemisphere

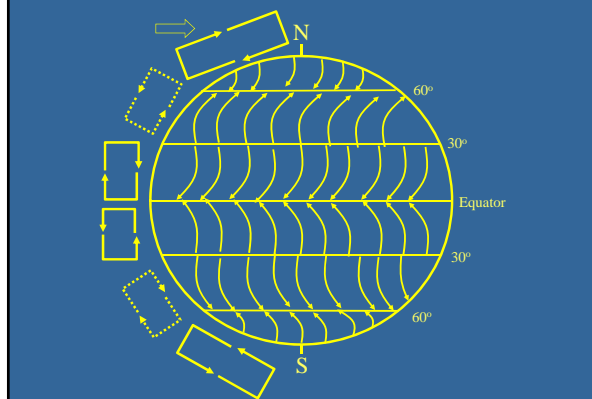
Southern Hemisphere

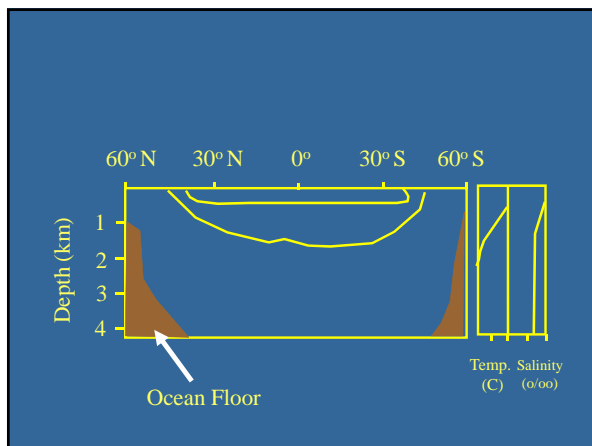
Understanding the Coriolis Effect via YouTube

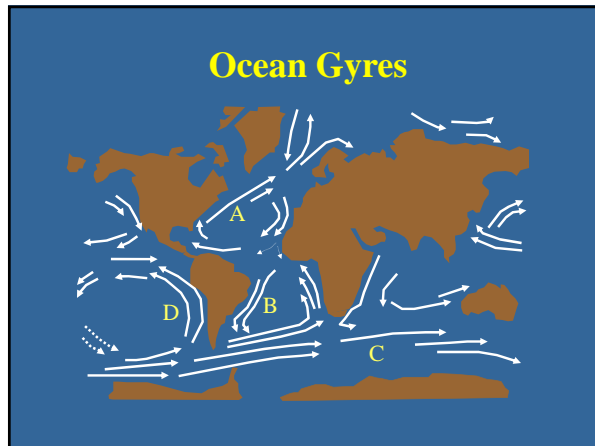
Check out this video:

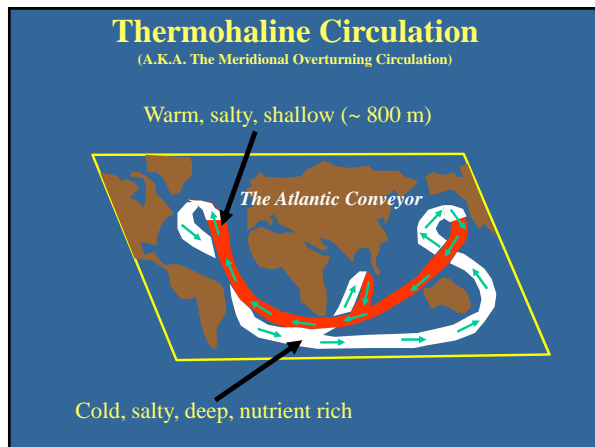
http://www.youtube.com/watch?v=mcPs_OdQOYU

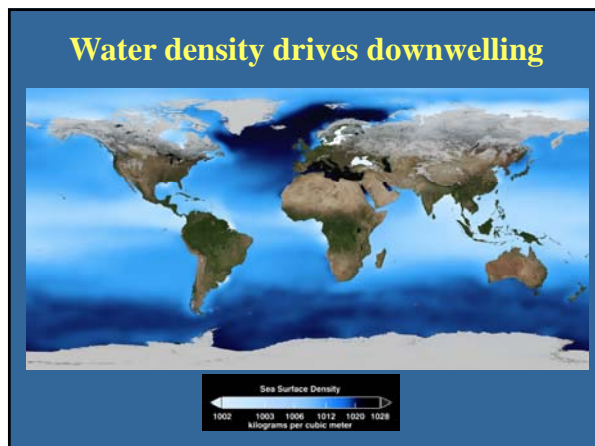
Pattern of General Circulation



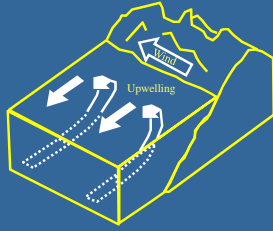








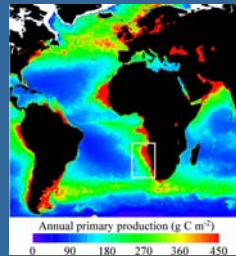
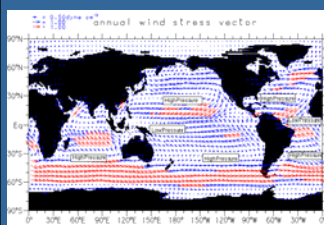
Coastal Upwelling in S. Hemisphere



Result of Ekman Drift

Net transport of water to the right of the wind in the N. Hemisphere & to the left of the wind in the S. Hemisphere.

Coastal Upwelling Linked to Productivity



Equatorial Upwelling Linked to Productivity

