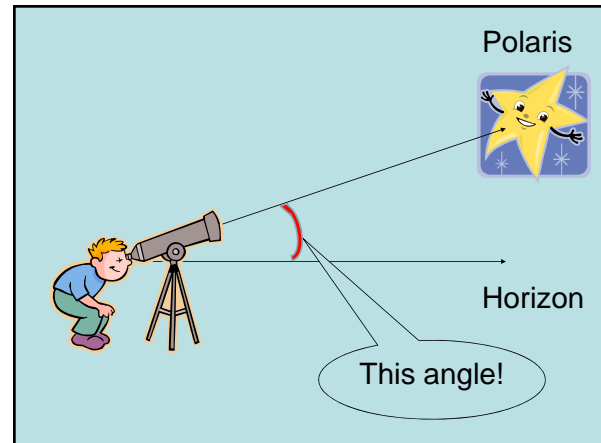
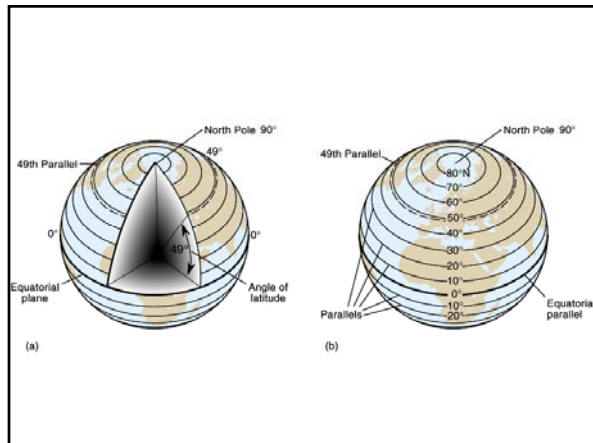


Essay Review #1

GEOG 101
The Natural Environment

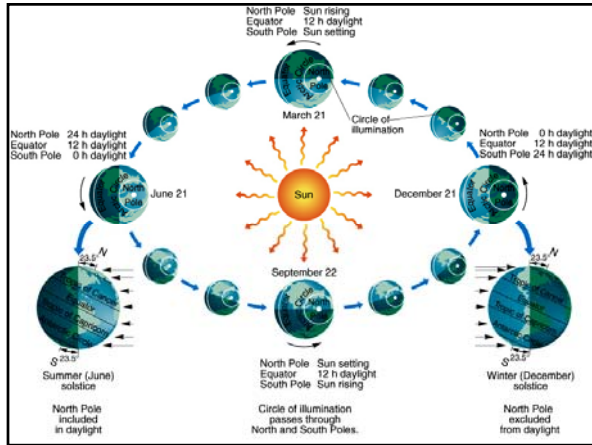
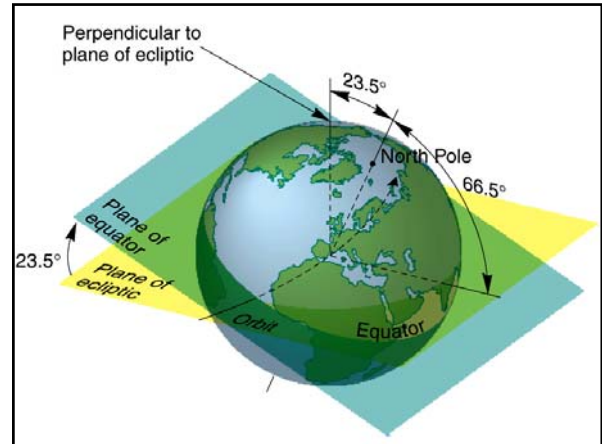
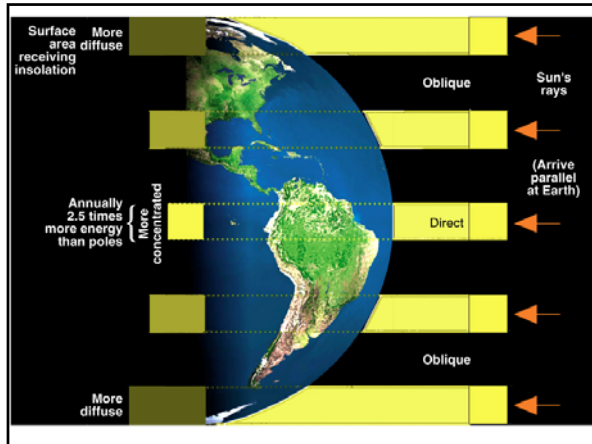
1. Latitude: Describe and explain how to find **latitude** in the Northern Hemisphere using the North Star (Polaris). What is latitude? What measurements do you need? How do you measure them? Use the latitude of Honolulu (21° N) as an example.



1. Latitude: Describe and explain how to find **latitude** in the Northern Hemisphere using the North Star (Polaris). What is latitude? What measurements do you need? How do you measure them? Use the latitude of Honolulu (21° N) as an example.

- Latitude: angular distance N/S
- Polaris and horizon
- Altitude, angle between them, etc.
- Altitude = latitude
- 21° above the horizon in Honolulu

2. Annual march of the seasons: Describe and explain the annual march of the seasons, including *plane of ecliptic, axial parallelism, circle of illumination, solstice, and tropics.*



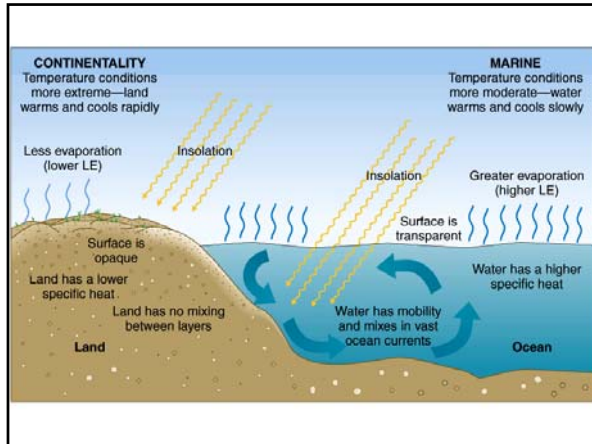
| Table 2-1 Five Reasons for Seasons | |
|------------------------------------|---|
| Factor | Description |
| Revolution | Orbit around the Sun; requires 365.24 days to complete at 107,280 kmph (66,660 mph) |
| Rotation | Earth turning on its axis; takes approximately 24 hours to complete at 1675 kmph (1041 mph) at the equator |
| Tilt | Axis is aligned at a 23.5° angle from a perpendicular to the plane of the ecliptic (the plane of Earth's orbit) |
| Axial parallelism | Remains in a fixed alignment, with Polaris directly overhead at the North Pole throughout the year |
| Sphericity | Appears as an oblate spheroid to the Sun's parallel rays; the geoid |

2. Annual march of the seasons:
 Describe and explain the annual march of the seasons, including *plane of ecliptic*, *axial parallelism*, *circle of illumination*, *solstice*, and *tropics*.

- Revolution: Plane of ecliptic
- Rotation: Axial parallelism
- Circle of illumination: Day length
- Solstice: Summer and winter
- Tropics: Cancer and Capricorn

← Declination

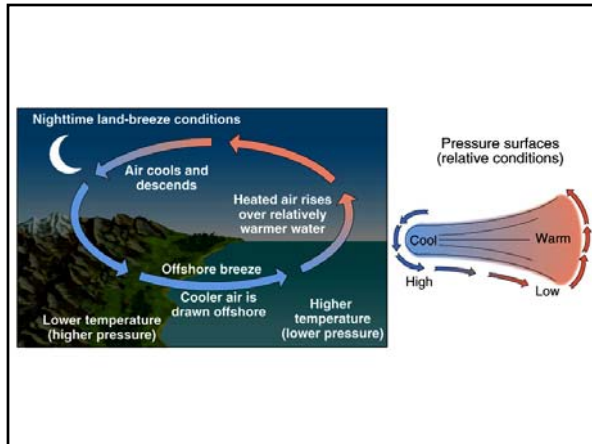
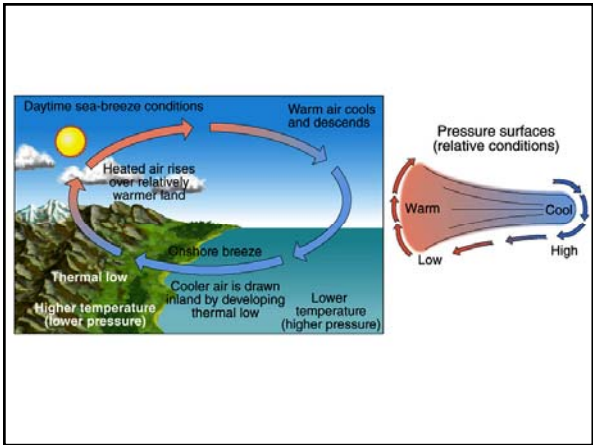
3. Land-water heating differences: Compare and contrast the land-water heating differences. What are the associated **temperature patterns** with water bodies and land? List the **4** reasons for the land-water heating differences and explain the role of each.



3. **Land-water heating differences:** Compare and contrast the land-water heating differences. What are the associated **temperature patterns** with water bodies and land? List the **4** reasons for the land-water heating differences and explain the role of each.

- Moderate temperature = water bodies
- Extreme = inland
- Evaporation
- Transparency
- Specific heat
- Movement

4. **Land-sea breezes:** Compare and contrast (1) temperature, (2) pressure and (3) wind direction in **land breeze** and **sea breeze**. Also, explain how these variables are related. You may include a diagram to support your answer.



4. **Land-sea breezes:** Compare and contrast (1) temperature, (2) pressure and (3) wind direction in **land breeze** and **sea breeze**. Also, explain how these variables are related. You may include a diagram to support your answer.

- Daytime situation:
Warm: land Cool: ocean
- Night time situation:
Warm: ocean Cool: land
- Warm = low pressure; Cool = high pressure
- Wind blows: High → Low
- Correct label of winds: Land-sea breezes

