- What is climate?
- What factors do we look at to determine climate regions?
- How does this relate to the energy budget of the planet we looked at the beginning of the Weather unit?

What affect do the following have on climate?

- latitude
- distance from equator
- tilt of axis
- prevailing winds
- mountains
- ocean currents

What is Climate?

average temp. & precip. of an area over long period of time

Things that affect Climate

Latitude
Tilt of Axis
Ocean currents
Location of Continents
Mountains

Major Climate Zones

Tropical Rainy
Dry
Temperate Marine
Temperate Continental
Polar

Affect of Latitude

- energy recieved at the surface is directly impacted by latitude
  - more energy per square foot at equator

- global wind systems
  - 0-30 TRADE WINDS
  - 30-60 Westerlies
  - 60-90 Polar Easterlies

Between 60° and 90° there is a climate region.

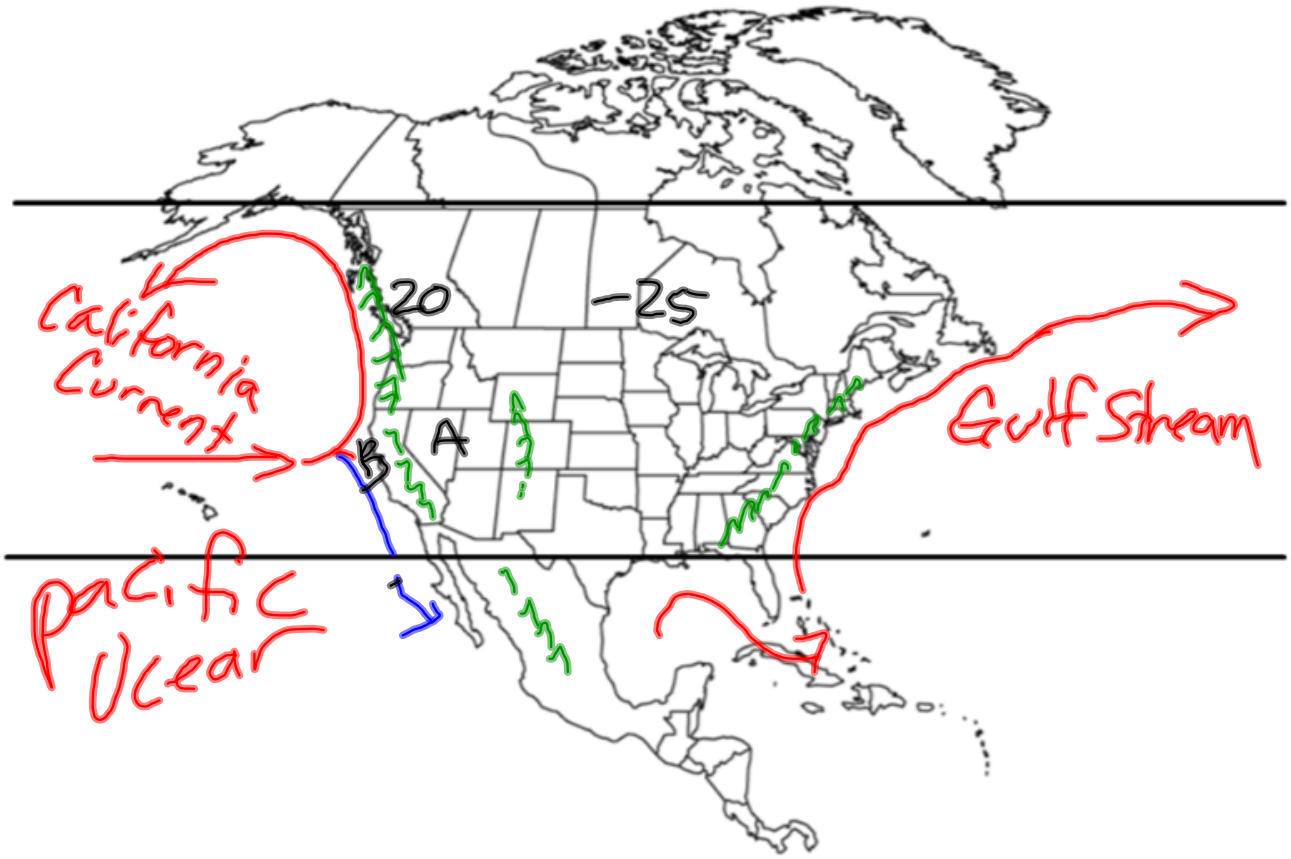
What region is this?
- give one of 5 major Region
  also what are sub regions

What are the conditions like there?
- describe the major Region
- also describe subregion

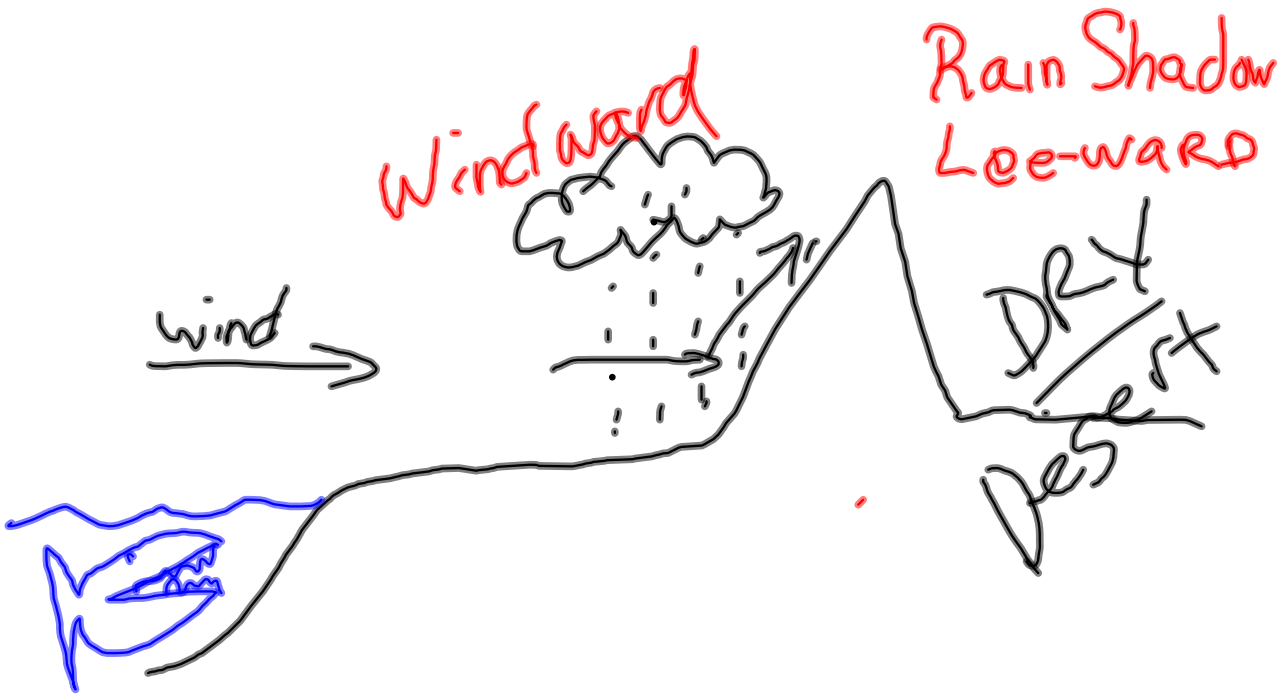
Why is it like that?

0,60 Rises = moisture condenses - Rain

30, 90 Sink = Dry air - little Rain


California Current
20
-25
A
B
Gulf Stream
pacific
Ocean

Affect of Mountains on



Ocean Currents

- Moderates temp. of land near them
- Wind blowing across water brings moisture and temperature of water to the land.

Affect of Continent Location on Climate

- closer a location is to the equator the more concentrated the energy so the warmer it is
- Example:
  * Right now Antarctica has ICE CAP and Tundra climate zones

BUT there are fossils of tropical ferns in the rock of the continent

Therefore The continent had to have moved from tropical to polar Location

* Location of continents affects the ocean Current

Affect of Tilt

* If you are tilted towards the sun, energy is more concentrated than other times of the year, so... its warmer

* At poles there are periods of time that recieve no daylight

  Also times when there is 24 hour day light

* Tilt affects the length of day light hours. Longer day give more time to absorb energy.