21 = 2 \times 10.5
Micro-thermals - are all located in the Northern Hemisphere

Also referred to as continental thermals

- Summers - Short & Hot
- Winters - Long and very wet

Franklin stove - used for heating; made out of cast iron

* People need to be more inventive

April/October - are always nice anywhere

Permafrost - ground is permanently frozen.
Growing season is so short you cant grow cereal grain

Alaskan oil pipeline - pipe well insulated to prevent sinking due to the heating flow thru pipe

Basement is a hole you dig in ground

Perma - frost is all the way thru ground

Roofs are slanted due to lots of snow

Footings for support
Growing Season -
- Last killing frost of spring to 1st killing frost of the fall.

°F: If temp drops bellow 28°F for over 4 hours is considered a frost.

°F: Boreal Climate - Greek God of the Winds
°F: Aboreal - tree like

Even greens - located away from equator.
The more warm you go the shorter the trees grow.

Tree line - there is at 19,000 ft. above that there are no trees. It's too cold for them to grow.

Above India - there is a Himalayan Climate.
- Tundra - another Name for Ind Climate.

More Solar Radiation @ Top of mts. = Becuz/ Lessen Atmosphere

At top of mts.
- there is a drop of pressure.
- 2 people experience.
  - Attitude Sickness - From Change of Attitude.
  - High Altitude pressure can cause Still Birth.
Review Climates C, D, E

Hydrological Cycle

Also

Evapotranspiration

Impervious Layers

Water flows down by gravity

By using wells and pumping up water out of water table, thus will dry out spring

Storage tank

Well

Natural spring

Water table

Depression

Aquifer

Taking out too much H2O will dry up the soil

Water pump needs to be below H2O table

Remove minerals, deposit around faucets, etc. (just like salt)

The deeper the well, the harder it is to get water
Quality of H₂O

(California) => Delta, Contra Costa County

Concerns:
- Quality
- Quantity

People who live here buy bottled H₂O.

Water coming from San Joaquin River very polluted, that goes into Delta.

Water has a taste, depending upon what minerals it percolates thru.

Calcium Carbonate Mineral = Carbonated H₂O

Bottle Water (4 types)

Least expensive = Basic Bottle Water = Spring H₂O (must be tapped from spring)

Little more expensive = Purified H₂O

More expensive = Pure H₂O (Distilled H₂O)

Why does it cost a lot of $ to run a Distiller Machine?

A) Because the latent heat to evaporate H₂O.

* Afluent = stream carrying crude water out of ground H₂O
* Influent = stream carrying good/ (polluted) water into ground H₂O

* MTB - Gas stations

Out houses

Hole in ground

Not good for ground H₂O

Idea - wells need to be dug far away from out houses.
AQUIFIER = Underground water is stored in and moves slowly through, moderately to high permeable rocks.

<40% of H2O that SC. gets ⇒ is from San Lorenzo River.

SOILS -

1) Factors that need to be considered when talking about soils:
   (1) Parent material (Broken up Rock)
       Minerals which are present in Rock
       Determine how fertile is the soil.
       Texture of soil

2) LAND FORM
   Think Half dome.
   The steeper the slope the thinner the soil.
   The flatter the slope (=) thicker soil = Alluvium
   Richest soil = Called Bottom land
   Found by creek beds. Better for farming

3) Biological activity
   Soil is a living substance
   Wormy bacteria, gophers.
   Chickens roost worth just as much
   as the chicken eggs.
   Good Fertilizer
   All criteria doing their job.