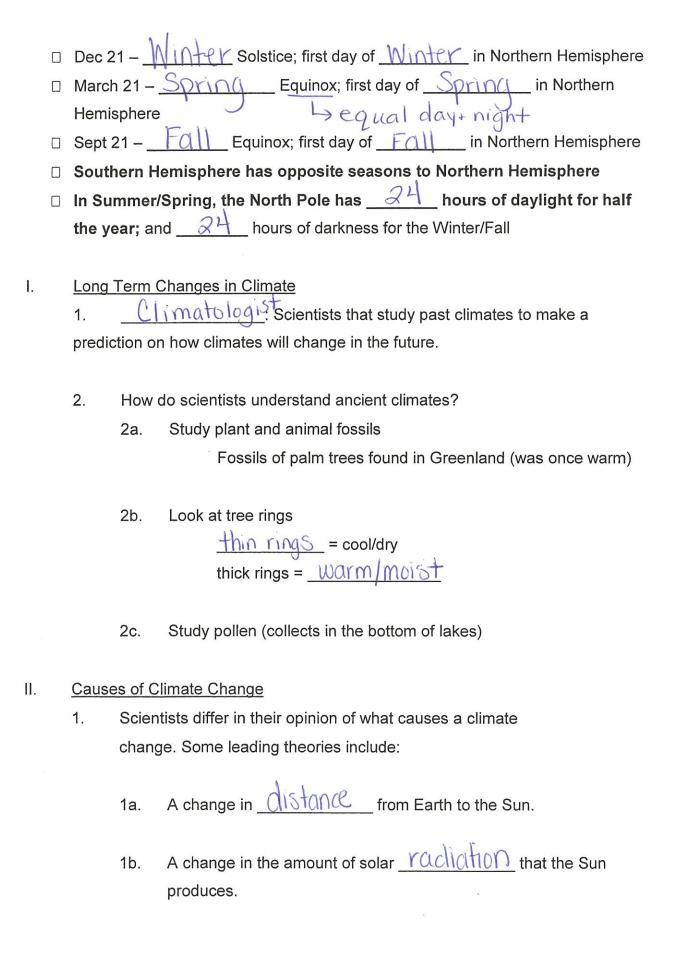
Key Concepts in Climate

Climate – average weather over a period of time		
Weather - Short term condition of the atmosphere		
5 Major Factors Affecting Climate		
1. Altitude – the higher you go, the colder it gets		
2. Latitude – higher latitudes have temperatures due to low sun angle		
3. Proximity to water – water <u>Moderates</u> temperatures along the coast		
because of water's specific heat (heat capacity); water affects climate		
mostly if the prevailing winds blow over the water just before reaching the land		
4. Ocean currents – Warm ocean currents <u>Warm</u> the coast, cold ocean currents		
the coast		
5. Mountain Ranges – Windward side is Wet , leeward side is OVU		
Insolation = Incoming Jolar Kadiation		
Can be Reflected (bounced back),		
Refracted (bent),		
Scattered (bounced in all directions), or		
Absorbed (taken in)		
Reflectivity – percent of light that is reflected by a surface		
□ Light and smooth surfaces are good <u>reflectors</u> (have high albedo)		
□ Dark and rough surfaces are good <u>Obsorbers</u>		
What causes seasons?		
□ Earth's <u>rotation</u> on its tilted axis as it <u>@</u> around the Sun!		
The Earth is actually <u>forther</u> from the Sun in our Summer, BUT at that time		
the Northern Hemisphere is tilted toward the Sun giving us more direct sunlight.		
□ June 21 – <u>Summer</u> Solstice; first day of <u>Summer</u> in Northern Hemisphere		



1c.	Differences in PositionS of the continents.
Long Term C	Changes in Climate
1. Ice Ag	ges: Describe any period in history in which precipitation
	or ice. Accumulation exceeds melting.
1a.	The last ice age in New York State occurred 10,000 years
	ago.
1b	Proof:
	Hudson River/Tappan Zee Bridge
	Gravel pit in Sparkill
	Glacial Striations/erratics
1c. Int	erglacial periods:
	Describe the periods <u>Detween</u> ice ages.
	to the care that had a regal being so the COAA
	There have been main ice ages (each lasting
	approximately 100,000 years)
	Some scientists believe that the period between ice ages
	are actually periods of IVAKMINA

Long Term Changes in Climate 1.

III.

- Global Warming: A gradual increase in the temperature of 2. Earth's atmosphere.
 - 2a. Global warming is a result of the Greenhouse Effect.

- 2b. Greenhouse Effect The process by which gases in Earth's atmosphere trap solar energy.
- 2c. Gases in the atmosphere that trap solar energy are called Greenhouse gases.

EX: Car bon Dioxid water vapor, and methane.

- 2d. Cause of global warming...human activities.
- 2e. Potential impact as a result of global warming:

Higher TemperatureS = more water evaporated.

(bad for farming a crop dependency)

Higher temperatures will heat up ocean water = more hurricanes!

Higher temperatures will melt glaciers = the Sea level will rise and flood low laying coastal areas (Florida)

- 3. <u>Ozone Depleton</u> The steady destruction of the ozone layer allowing more ultraviolet radiation (UV) to enter into Earth's atmosphere.
 - 3a. When UV comes in, it can't get out!
 - 3b. The ozone layer is found in the stratosphere.

FACT: The ozone layer is Earth's natural sunscreen!

3c. Cause of ozone depletion = human produced chemicals such a chlorofluorocarbons (CFC's)