Intro

1. What is your favorite weather?

1. If you could move anywhere in the world, where would you move? What is the climate like in this place?

1. How was your break?

Agenda

1. Intro (5)
2. Weather vs. Climate (15)
3. Kahoot (15)
4. Ice core data + Milankovitch Cycles notes (20)
5. Reading or Urban Game (20)

Kahoot

What force has the biggest influence on our climate?

(insolation)

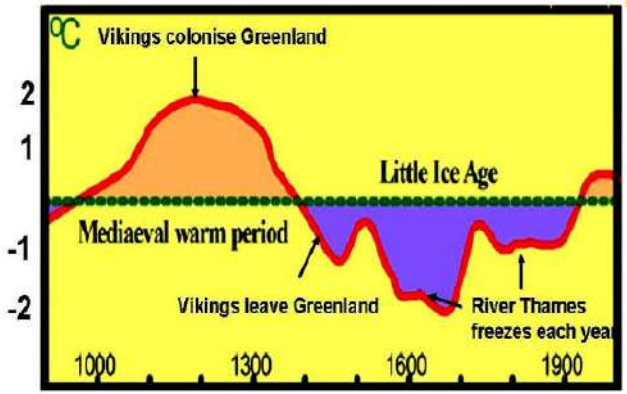
TTTPNTY

1. What do you know about past climates?

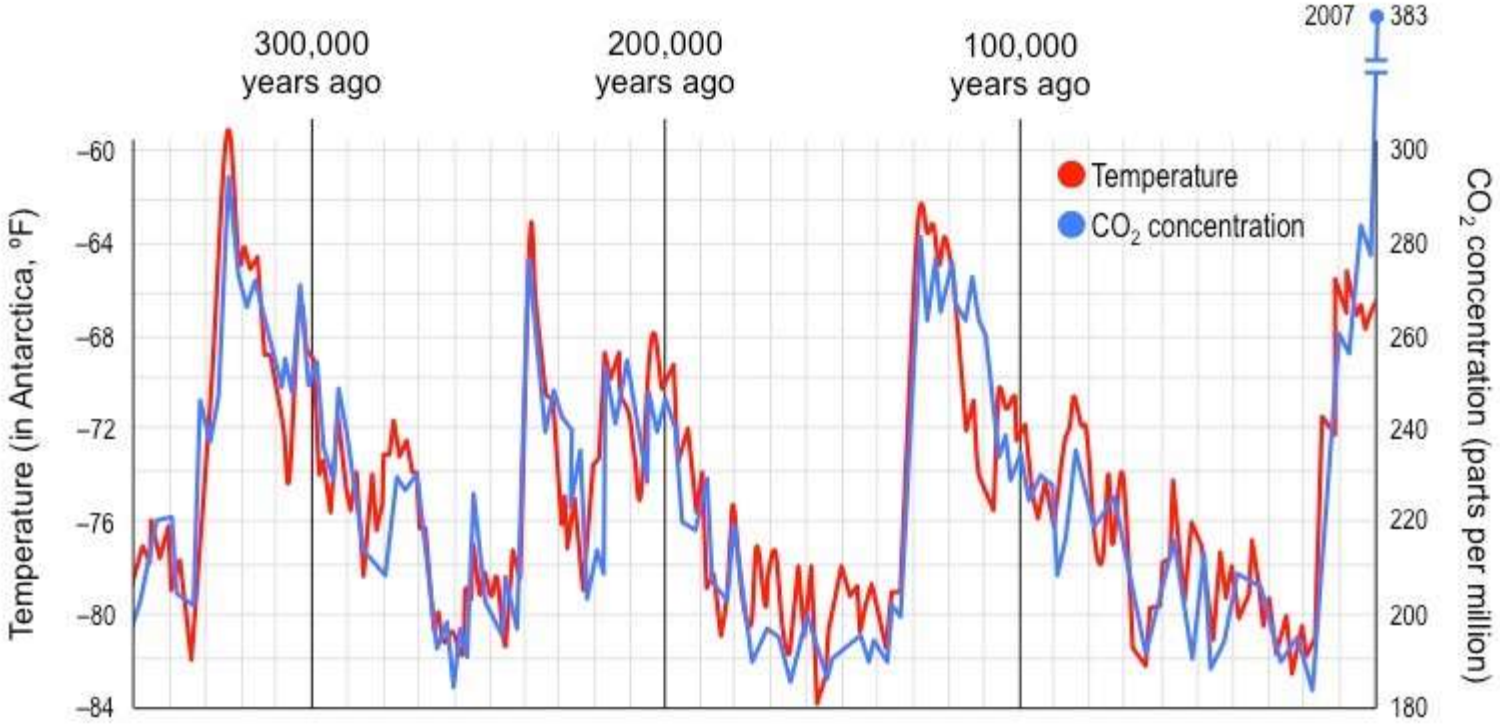
1. Has the Earth always had the same climate? Why or why not?

Milankovitch Cycles

- Earth's climate has **always** changed naturally
  - These changes occurred in cycles
- If all 3 forces lined up perfectly, ice ages or warm periods would occur



Climate Change -temp follows CO_2

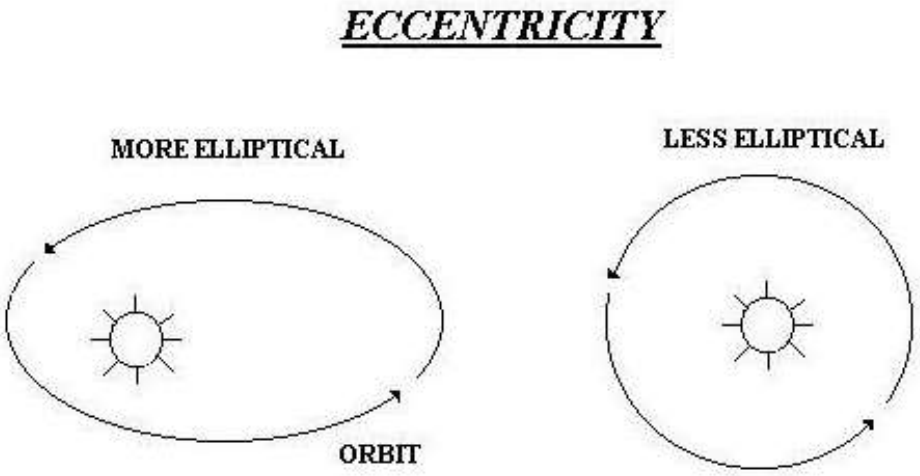


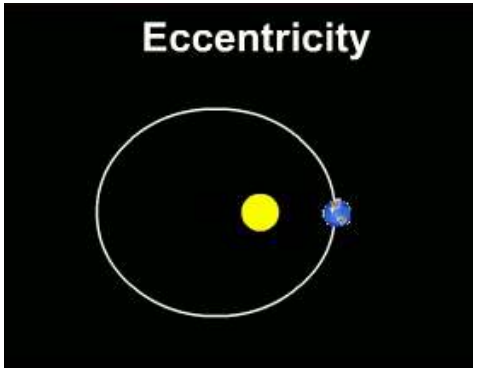
Milankovitch Cycles

ECCENTRICITY

- 100 kyr cycles

- Earth moves closer and further from the sun since the orbit becomes less circular
  - Potential flips the seasons



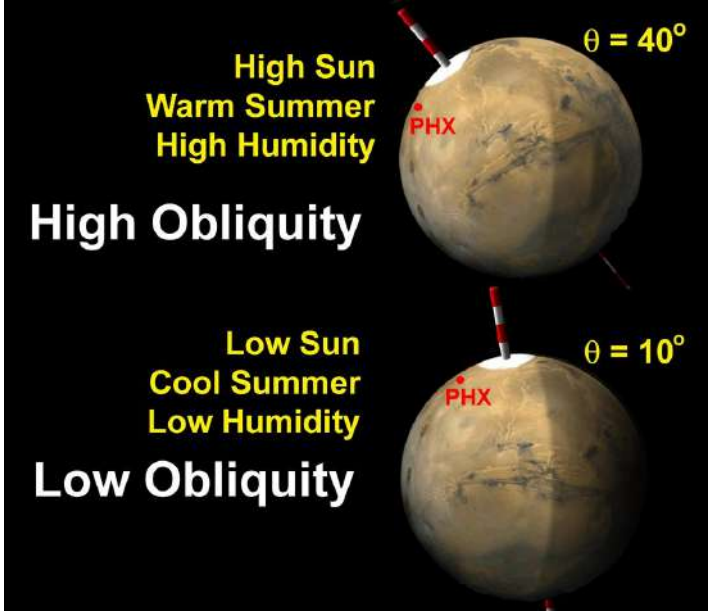


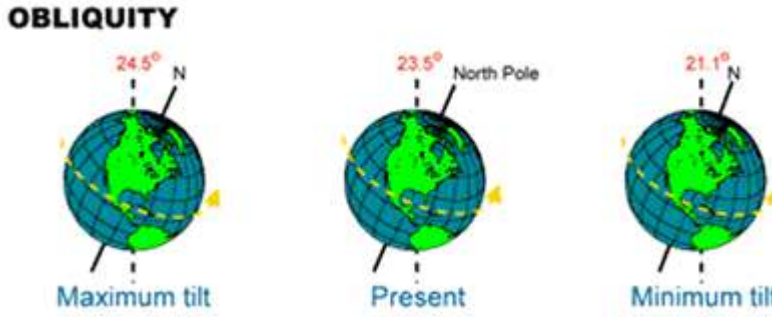
Milankovitch Cycles

OBLIQUITY (*TILT*)

- 41 kyr cycles

- In a hemisphere that is at max tilt (24.5) it will be warmer since there is more insolation
- If a hemisphere is at minimum tilt (21.1), it will be colder with less insolation



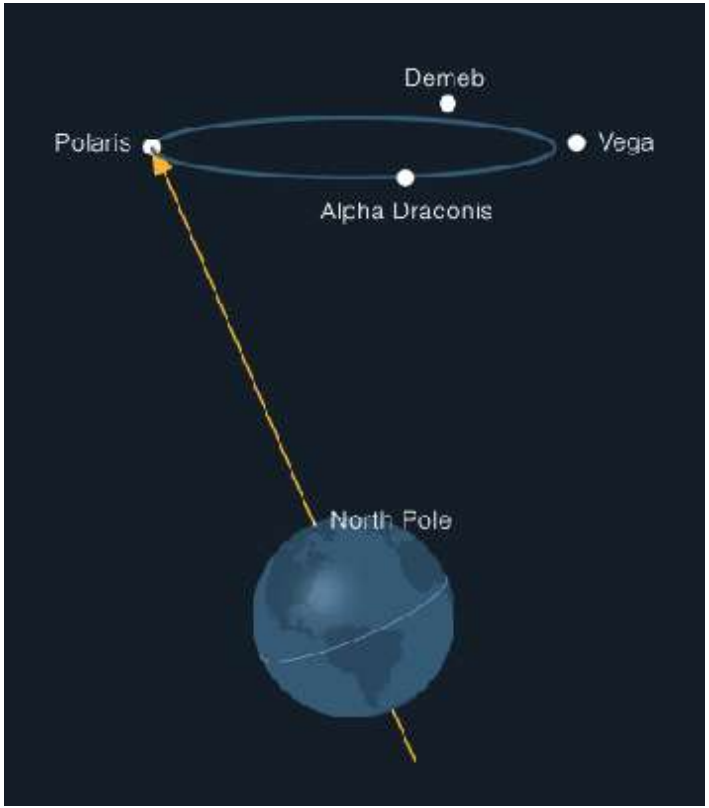


Milankovitch Cycles

PRECESSION (WOBBLE)

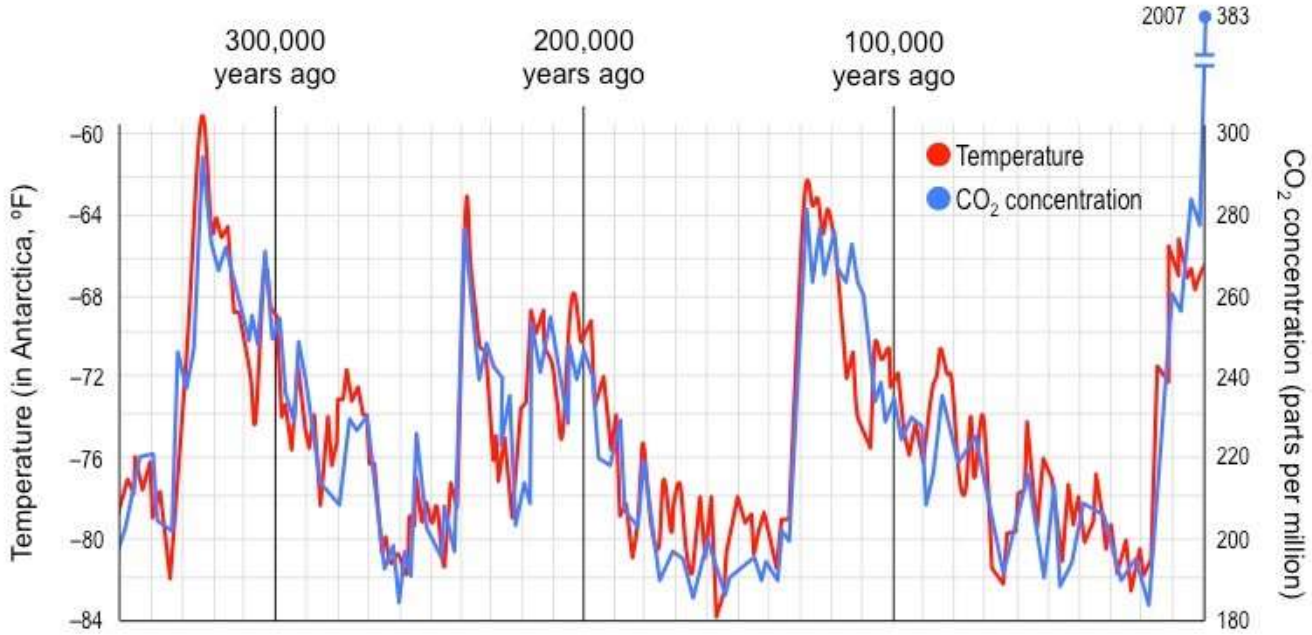
- 23 kyr cycles

- Amplifies or weakens seasons



Climate Change -temp follows CO_2

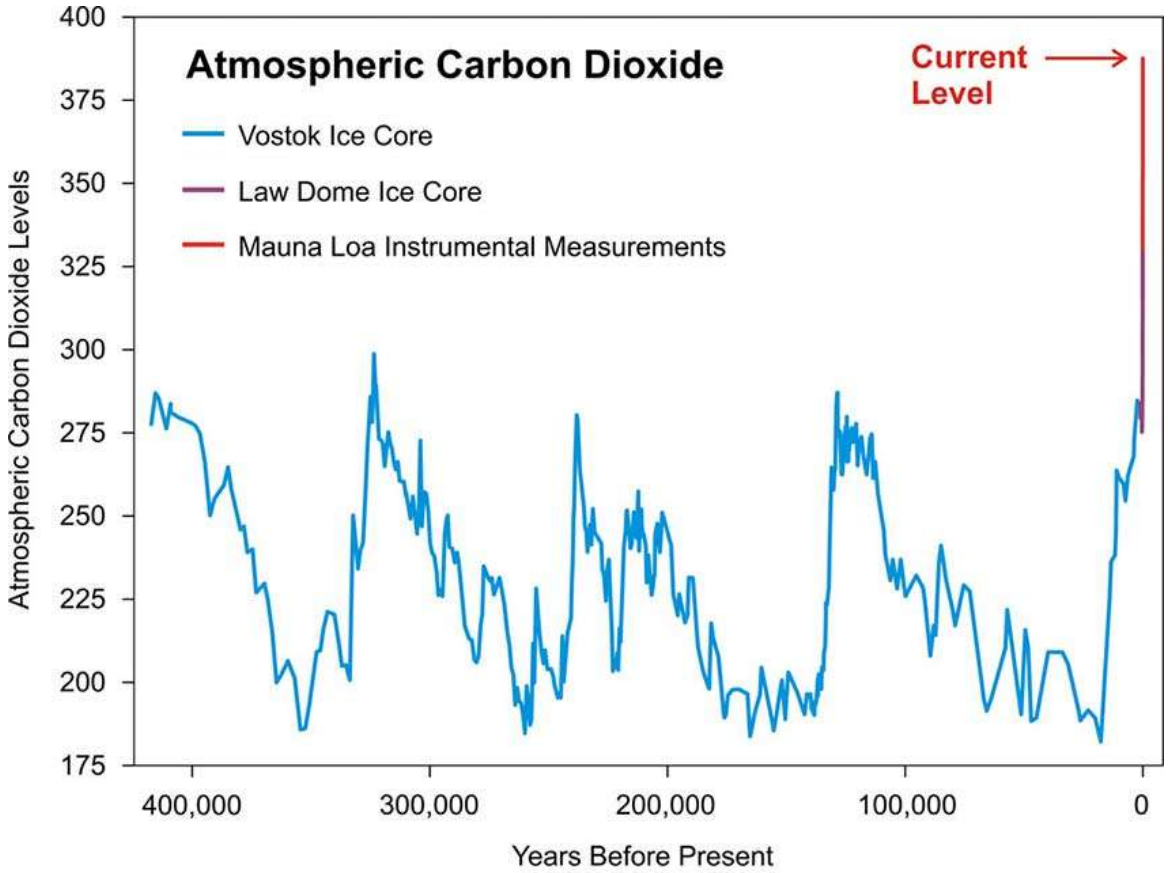
How would different amounts of insolation affect or change the CO2 on our planet?



Last Glacial Maximum

http://itg1.meteor.wisc.edu/wxwise/climate/earthorbit.html


NATURAL
HISTORY


Atmospheric Carbon Dioxide
Current Level
Vostok Ice Core
Law Dome Ice Core
Mauna Loa Instrumental Measurements
Atmospheric Carbon Dioxide Levels
400
375
350
325
300
275
250
225
200
175
400,000
300,000
200,000
100,000
0
Years Before Present

Now... go to Google Classroom