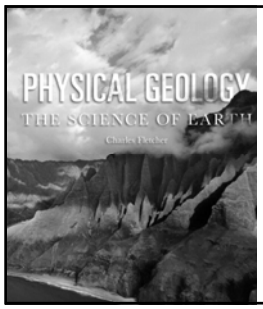
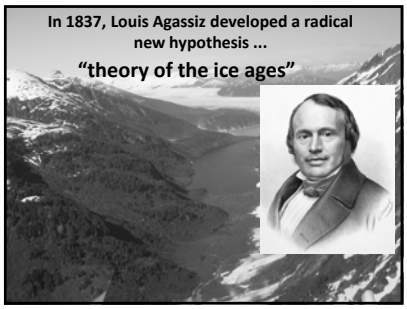
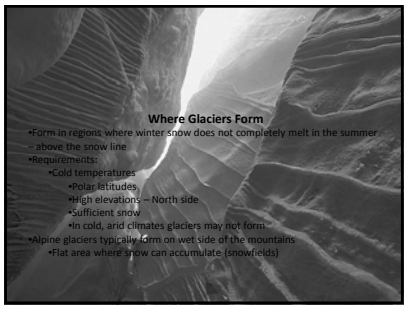
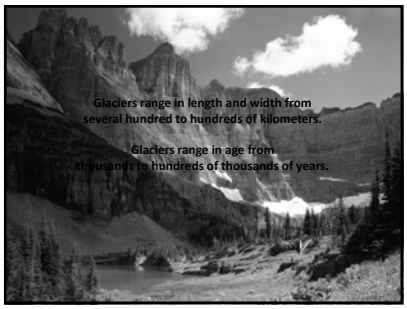


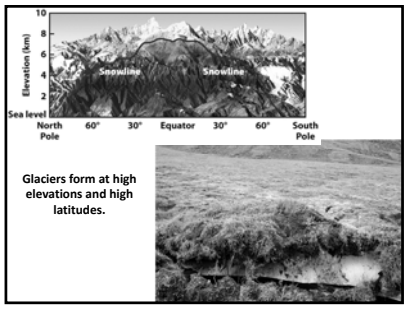
GLACIERS AND PALEOCLIMATOLOGY

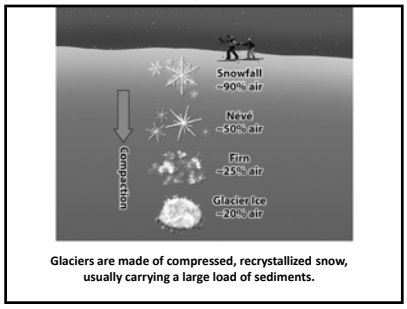
CHAPTER 17

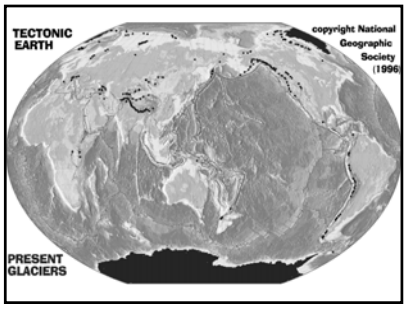




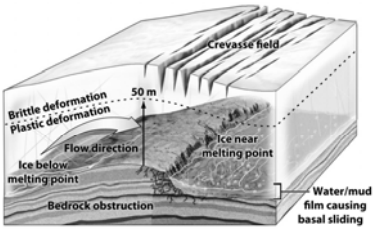








Glaciers form on land, undergo internal deformation, and create glacial landforms.

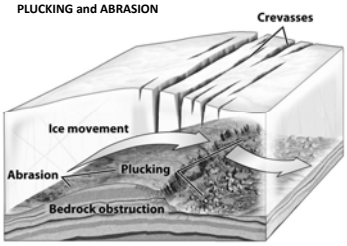


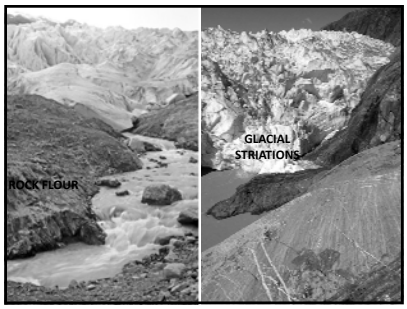
Basal sliding is Plastic flow - temperature of ice

How Plastic flow - ice?

As Ice Moves, It Erodes the Underlying Crust.

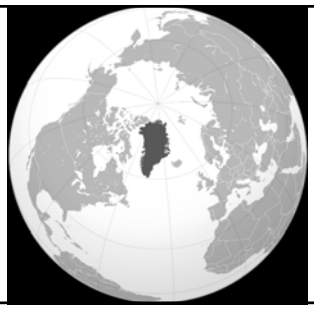
PLUCKING and ABRASION

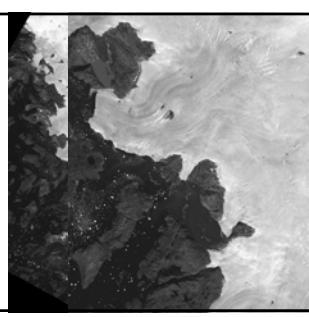




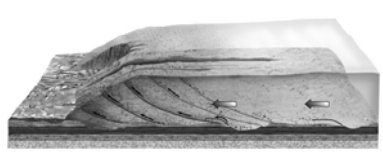
ALPINE GLACIERS

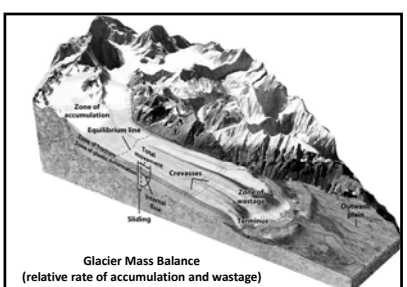
CONTINENTAL GLACIERS



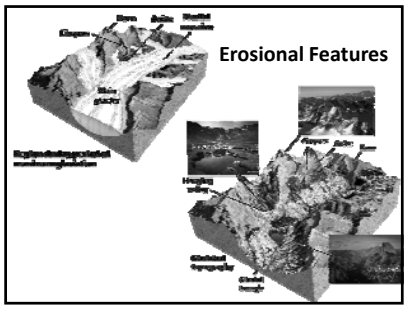


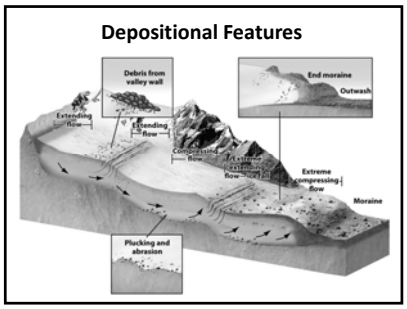
Ice Moves
Through the Interior
of a Glacier
as If on a One-Way Conveyor Belt.

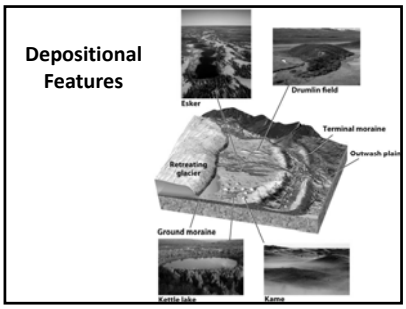




Glacier Mass Balance
(relative rate of accumulation and wastage)





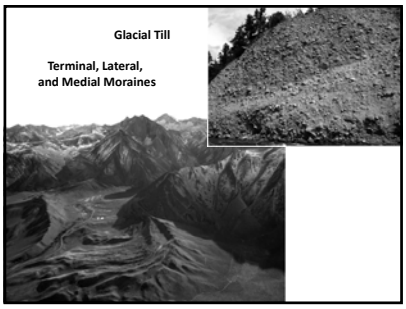


U-shaped Glacial Valley

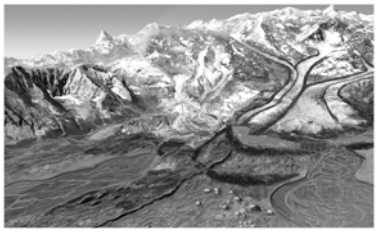
Esker…

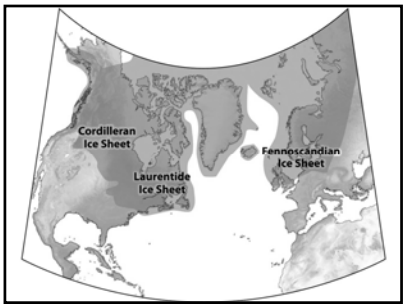
Glacial Till

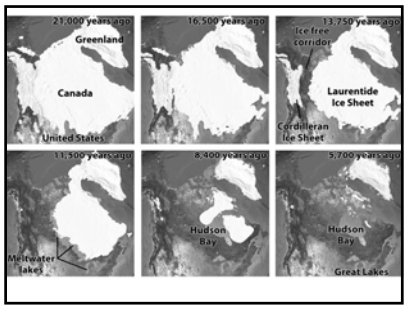
Terminal, Lateral, and Medial Moraines

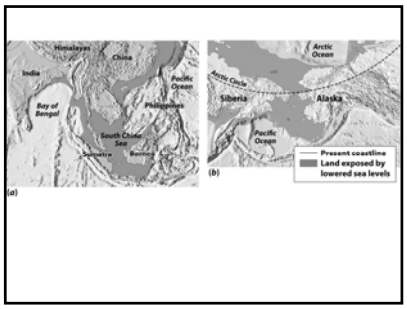


Identify the Glacial Landforms

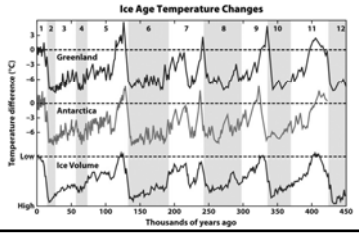


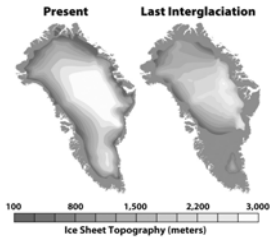




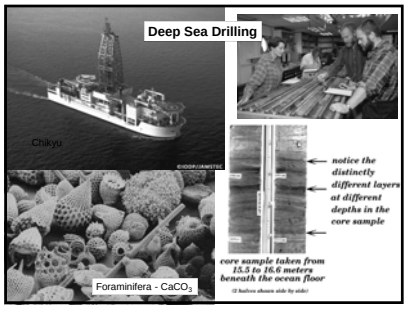


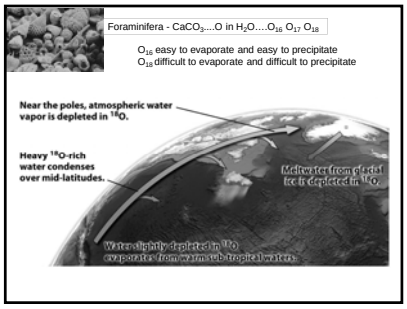
Earth's Recent History Has Been Characterized by Cycles of Ice Ages and Interglacials.

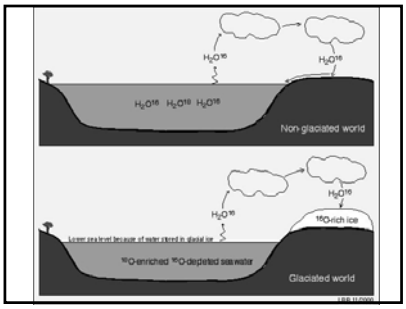


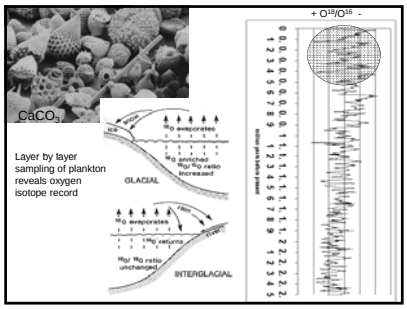


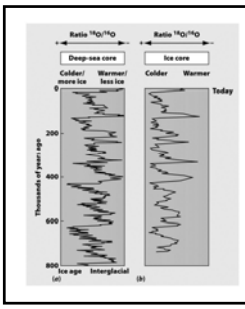
Greenland, during MIS 5e



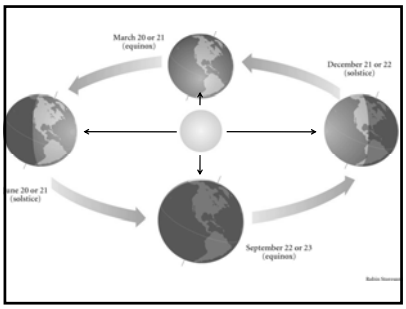


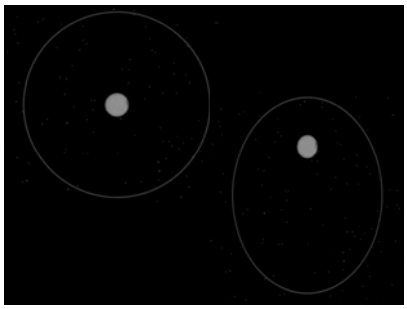


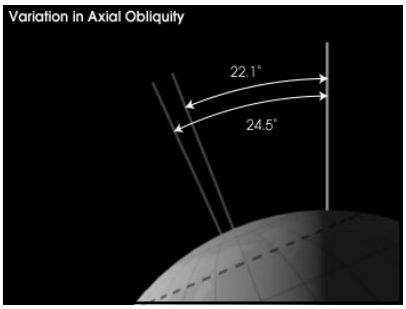


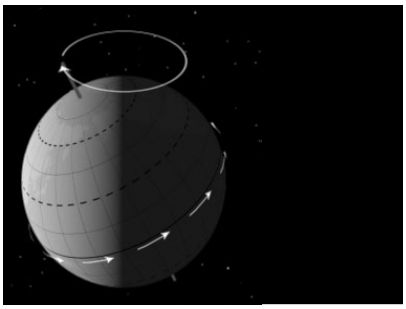


The Ratio of Oxygen Isotopes in Glacial Ice and Deep-Sea Sediments is a Proxy for Global Climate History.

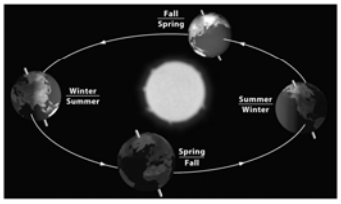


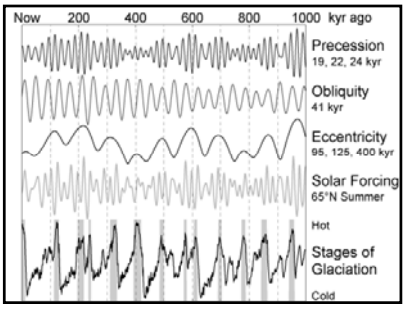


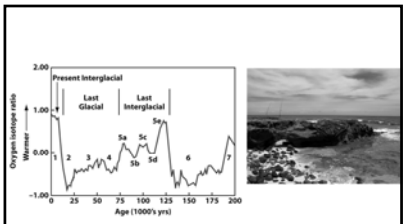




Glacial–Interglacial Cycles Are Controlled by the Amount of Solar Radiation Reaching Earth.







During the Last Interglacial, Climate Was Warmer and Sea Level Higher than at Present.