Brief History of Earth

4.5 b.y. ago earth formed from a cloud of dust and gas that circled proto-sun as a disc. Dust and gas collapsed and formed proto-sun and planets.

- Early atmosphere was dominantly nitrogen and carbon dioxide.
- Luminosity of sun was about 30% less than present in early history, yet earth was as warm then as now.
- More high energy radiation early in sun’s history which may have led to more adsorption of radiation.
- More carbon dioxide in atmosphere may have created greenhouse effect.

Heat from radioactivity and gravitational collapse caused earth to melt and differentiate into core, mantle and crust.

4.0 b.y. first known continental crust.

Until about 3.8 b.y. ago earth was heavily bombarded by relatively large meteorites.

Early life formed by this time.

By 3.5 b.y ago life as single celled organisms had evolved.

Oxygen in atmosphere resulted from photosynthesis by green algae.

There have been multiple periods of major continental glaciation.

First shelled animals evolved about 535 m.y. ago.

Dinosaurs first appeared about 200 m.y. ago.

Dinosaurs became extinct about 65 m.y. ago, perhaps due to a large meteorite impact.

First humanoids appeared about 7 m.y. ago.

Pleistocene or ice ages began about 2 m.y. ago.

Glacial and interglacial periods cycle with a period of about 100,000 years. Interglacial periods are about 10,000 years in duration.

First modern humans appeared about 120,000 years ago.

Peak of last glaciation occurred about 20,000 years ago.

Sea level was 400 feet lower

Long Island was not an Island then

End of last glaciation began about 10,000 years ago. We are presently in an interglacial period.

Agriculture started about 10,000 years ago.