When Did Life On Earth Begin?

1. When the earth first formed, water was not present. Describe the current theory of how the earth acquired water (reading assignment 1).

2. Know the approximate time (number of years ago) that the first life forms appeared on earth and indicate two geological or climate factors that have greatly influenced biodiversity during the long period of life on earth.

3. Be able to describe conditions on the early earth at the time that protocells appeared, including composition of the atmosphere.

4. Regarding the first forms of life, be able to:

   - Describe the structure of a "protocell".

   - Describe how the first cells probably obtained nutrients (what was the "primordial soup"?).

   - Explain, in general terms, how the first cells generated energy.

   - Indicate what information storage molecule was probably utilized by protocells.