**Archaea**

1. **Kingdom/Domain Archaea**
   1. “Archaea” comes from the GREEK word meaning ANCIENT
   2. Previously grouped with BACTERIA in the kingdom MONERA, differentiated in the 1970’s by WOESE based on rRNA analysis
   3. PROKARYOTES, meaning they don’t have a NUCLEUS
   4. Extremophiles, some examples
      1. Methanogens: consume CO2, N2, or H2S as a source of energy and produce NH3 as a waste product
      2. Halophiles: means SALT loving, live in environments where salt concentrations may reach up to 15% (compared to 3.5% in seawater)
      3. Thermoacidophiles: means HEAT and ACID loving
   5. These environments in which Archaea thrive are thought be be similar to Earths early atmosphere which indicates that THEY MAY HAVE BEEN THE FIRST LIVING ORGANISMS

**https://www.youtube.com/watch?v=D69hGvCsWgA**