This list is designed to give you ideas for your research paper in this course. You may directly choose one of the topics below, modify a topic to your taste, or develop your own topic from scratch using these as inspirations and examples of scope and coverage. Note that these are *topics* not paper *titles*. See the other side of this page for the form.

Paleoenvironments of the Cuyahoga Formation (Lower Carboniferous)

-- Note that you can study the paleoenvironmental framework of *any* sedimentary unit.

Using volcanic ash layers for stratigraphic correlation
Clay mineralogy of ancient soils
The sedimentary structures in volcanic mudflows (lahars)
Lacustrine carbonates and their importance for paleoenvironmental analysis
The geochemical controls of Calcite Sea carbonate precipitation
Alluvial fans in deserts: sedimentological processes and patterns
Desert varnish: its formation and utility for paleoclimate analysis
Origin and development of sedimentary phosphates
Why do streams meander? Has meandering been influenced by land plant evolution?
Determining hydrodynamics of currents from flaser and lenticular bedding
Clay mineralogy as a key to sediment provenance and depositional environments
Stratigraphic correlation in archaeological sites, as shown by an example
Hydrodynamic controls of delta development
Tufa and its use in discovering ancient hydrological regimes
The utility of isotopes and trace elements to discern sedimentary provenance
Seismites and other sedimentary structures used to analyze ancient earthquakes
Sedimentological patterns in braided river deposits
The relationship between vegetation and sand dune morphology
Gypsum and anhydrite deposits of the Messinian Salinity Crisis
How do carbonate hardgrounds form?
Sedimentological applications of ground-penetrating radar
The formation and diagenesis of chert in ophiolite complexes
Eolian sedimentation on Mars
Evidence for ancient fluvial systems on Mars
The sedimentary geology of Pluto
Geochemistry and mineralogy of Martian sediments
Sedimentary processes on desert playas
How are ergs formed? Why are they more common at some times than others?
Sequence stratigraphy in carbonate deposits
Turbidity currents and the deposition of turbidites
Microbial mats and their effects on siliciclastic sediment movement
Sedimentology of submarine fan systems
Sedimentary evidence for the Snowball Earth Hypothesis
Sedimentary features in the absence of water: Examples from the Atacama Desert
Trace fossils as indicators of marine or terrestrial paleoenvironments
Please turn in this form (as paper) in your lab on Thursday, January 24.

Title (not just topic) of your research paper:

One key journal article (not website, not book) you will use for this research, using the required format:

(For the proper format, please see our Research Paper page on the course website.)

Example citation –