Biogeochemistry and Scientific Habit of Mind

The following set of questions are designed to help students develop a scientific and biogeoscientific frame of mind. Thinking scientifically requires the careful reading of the scientific literature and being able identify critical aspects of a research paper. The following questions can be applied to all of the papers available on this site. (Note: questions may have to be slightly altered if the paper is a review.)

**Form of assessment**: Can be assigned as out-of-class work to help direct student reading. Can also be used to direct and stimulate class discussions of the papers.

1. Scientific Method: What is the scientific question the researchers are asking?
2. Scientific Method: Why is this an important question?
3. Scientific Method: What are the hypotheses?
4. Scientific Method: How are they testing the hypotheses?
5. Scientific Method: Do the authors propose new hypotheses and/or research?
6. Scientific Method: What are the limits of the study?
7. Systems Thinking: What parts of the critical zone are involved in this research?
8. Systems Thinking: What ecosystem, critical zone, or global scale does this research include?