Assignment due by 5:00 p.m. on Friday, September 10.

Join a group of classmates from Chem 12H. Each group should have 3 or 4 students. Arrange a time to meet for an hour or so. Prior to the meeting, read Extracts from “Of the Nature of Things,” by Lucretius (http://courses.chem.psu.edu/chem12h/lucretius.pdf). Lucretius was a poet who lived about 2100 years ago. His book-length poem summarizes many ideas from philosophers of preceding centuries.

At the meeting, discuss the following questions.

a.) What ideas do you find expressed by Lucretius that remain valid in modern science? You should be able to find at least five such ideas. Which of Lucretius’ specific hypotheses do we now regard as incorrect, and how do they differ from our current thinking? Indicate somehow the part(s) of the poem that express each idea.

b.) How would you describe the basis for the arguments Lucretius presents, and how would you distinguish it from that which characterizes modern science?

c.) What is the import of line 15 under “Substance is Eternal,” (“And how accomplished by no tool of Gods.”) and how does it relate to the assumptions of modern science?

d.) What do you suppose are the goals of this assignment?

Prepare a group report answering the above questions. Include any additional comments you wish. Include the names of all participating group members. Send your report to your instructor by e-mail (AM section: tom@chem.psu.edu; PM section: pcb@chem.psu.edu) by 5:00 pm Friday, September 10. We will select a few of the reports to forward to the entire class.

Grading of this assignment is by deficit: If you don’t do it, you lose points. If you do it but do a shoddy job, you lose fewer points. The point value of the assignment is about equal to a quiz.

(We thank Professor J. Lowe for providing me with the background for this assignment. He was inspired in this area after a sabbatical at Cornell University, where Professor R. Hoffman (Nobel Laureate in Chemistry) used this poem in his freshman chemistry course.)