Practice week 11

1. Explain the views of evolution proposed by Jean-Baptiste Lamarck. (For more detail, see Wikipedia, “Lamarckism.”)

Explain which of Lamarck’s views persisted in Darwin, and which views did not.

Explain how Lamarck’s views were discredited, and how different “versions” of them returned by the year 2000.

2. What were the key contributions of Charles Darwin?   
What was the role of population in Darwin’s model?

Explain the roles of individual and population in evolution.

3. How did fossil evidence contribute to the developing models of evolution?

What key evidence from geology supported the role of fossils?

4. State three different “creationist” alternative models that claim to replace evolution. Explain the aim of each model, and how it fails to reconcile with physical and biological science.

5. Explain how scientists’ views of evolution have changed over the past century.  
Explain what features of evolution persist since Darwin, and which features have been modified.

6. Why do lemmings jump into the sea? (See Wikipedia, “Lemmings.”)  
See video: http://www.youtube.com/watch?v=VWuiGWkd7mM

7. What is experimental evolution?   
How does genome sequencing offer new opportunities to analyze the mechanisms of evolution?   
Propose an evolution experiment to test a specific question.

Hypothesize what the results might be, and how you might investigate them.