Week 2 Writing Activity: *Concise Writing and the Demarcation Problem*

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1 Chapter 1: Scientific Method and the Problem of Demarcation

1. In chapter 1 of our course book, we encounter a critique of the *scientific method.* Define, in your own words, the scientific method and how it is applied.

2. Reflect on the logic of the following statements. Why or why not do they make sense? Think of an example or a counter-example.

   - *My hypothesis states that a neutron will always decay into a proton and an electron. My observations confirm that I observe a proton and an electron for each neutron decay. My hypothesis is confirmed.*:

   - *My hypothesis states that a neutron will always decay into a proton and an electron. I continue to make observations of neutron decays, and when and if I see a neutron decay into a combination of particles other than a proton and an electron, I will reject my hypothesis.*:

2 Technical Writing Exercise 2: Distillation

"If someone was born between 1945 and 1991, then they have Strontium-90 in their bones. Eve has Strontium-90 in her bones. Therefore, Eve was born between 1945 and 1991." Obviously, this kind of argument is not deductively valid. The fact that Eve has Strontium-90 in her bones is no guarantee that she was born between 1945 and 1991. Eve might, for example, have grown up near a nuclear reactor in Pennsylvania in the late 1990s, where it was found that Strontium-90 was present as a result of environmental contamination. **Distill this paragraph into 1-2 sentences, maximum.**