

Writing Prompt	Implementation
<p>Process of Science: What is the process of science like? What happens during this process? What is the result, in general? What do you consider to be the key characteristics of science? Please sit quietly and write for 10 minutes about your perceptions of science as a process, and a way of knowing the world.</p>	<p>First day and last day of lecture in each of the study groups. Each was worth a 10-point (1% of total course grade) participation grade.</p>
<p>Chamberlain: <i>Quote from C. T. Chamberlain, a well-respected geologist, at the 1922 Geological Society of America meeting soon after Alfred Wegener proposed his Continental Drift Hypothesis: "If we are to believe Wegener's hypothesis we must forget everything which has been learned in the past 70 years and start all over again."</i> Why do you think Chamberlain expressed reluctance to "start all over again"? What problems do you think could arise in science with his form of thinking? What do you think is the end goal or the purpose of science, and is it supported by Chamberlain's thinking? Why or why not?</p>	<p>ESS and IG treatment groups at the beginning of lecture. This assignment was a 10-point (1% of total course grade) participation grade.</p>
<p>Wegener: 1. Describe one piece of evidence Alfred Wegener used to support his Continental Drift hypothesis. 2. Explain how this evidence supports his hypothesis. 3. How does this reasoning illustrate (or exemplify) part of the nature of science (or one of the characteristics of science) as a way of knowing the natural world?</p>	<p>ESS and IG treatment groups at the beginning of lecture. This assignment was a 10-point (1% of total course grade) participation grade.</p>
<p>Plate Tectonics: Describe geology as a way of knowing as expressed by the development of the Theory of Plate Tectonics. Use specific examples of characteristics of science, and specific examples from the development of Plate Tectonics, and make clear connections between the two to support your claims.</p>	<p>ESS and IG treatment groups as an optional, up to +5 points of extra credit question on the midterm exam.</p>
<p>Rock Formation: 1. Choose one rock you have learned about in this class. Name it. 2. Describe its features that enable geoscientists and geology students to distinguish it from other rock types. 3. Explain how this rock forms, relating the formation to the features you just described. 4. How does this reasoning illustrate (or exemplify) part of the nature of science (or one of the characteristics of science) as a way of knowing the natural world?</p>	<p>ESS and IG treatment groups at the beginning of lecture, and again following instructor feedback. Each was worth a 10-point (1% of total course grade) participation grade.</p>
<p>Earth's Age: Describe one way a scientist/scientists attempted to calculate the absolute age of the Earth before 1900. Describe how the absolute age of the Earth, and various other geologic events, is calculated today. How do each of these illustrate the imaginative/creative aspect of science as a way of knowing?</p>	<p>ESS and IG treatment groups at the beginning of lecture. This assignment was a 10-point (1% of total course grade) participation grade.</p>
<p>Relative and Absolute Dating: 1. How does Relative Dating work (how is it done) and what is the result? 2. How does Absolute Dating work (how is it done) and what is the result? 3. Do you have any concerns about your understanding of these concepts? If so, which ones?</p>	<p>ESS and IG treatment groups at the beginning of lecture. This assignment was a 10-point (1% of total course grade) participation grade.</p>
<p>Authority of Science: Do you think science has special authority when it comes to answering certain kinds of questions? Give an example. If so, what kinds of questions? If not, why not?</p>	<p>ESS and IG treatment groups as an optional, up to +5 points of extra credit question on the final exam.</p>