

Second Writing Assignment

Write a short paper (1-2 pages, double-spaced, typed) on ONE of the questions below. These are to be turned in by Noon on Monday, December 2. Papers should be submitted electronically to your TA in .doc, .docx, or .rtf format.

The goal of this paper is to explain clearly the central concepts employed in the question you select. Assume that your audience is a fellow student not in this class and that you are writing a tutorial to teach this student. To explain the material to that person you cannot just use the concepts we have developed in class; rather you must *explain* them. If you think it will help, you may create an illustrative example. Present your answers totally in your own words—do not quote material either from the website, the lecture slides, or any other source.

1. Design a PROSPECTIVE study to determine whether living near the ocean is a causal factor in above-average life expectancy. Identify the target group, the control group, and the independent and dependent variables. Discuss possible extraneous and confounding factors and how these might affect your findings. How might you control for possible confounds? What errors in reasoning should you be particularly concerned to guard against in carrying out such a study? What factors should be considered in deciding whether the results from your study can be generalized to others?

2. You have often heard that children who study music have above-average ability in mathematics. Design an EXPERIMENT to test whether studying music is a cause of (or a causal factor in) above-average mathematical ability. Discuss all of the critical factors involved (operational definitions, values of independent variable, possible extraneous variables, possible confounding variables, etc.). How might you control confounds in this study? What errors in reasoning should researchers be particularly concerned about in evaluating the results of their study? What factors should be considered in deciding whether the results from your study can be generalized to others?