

Spring 2016

First Year Seminar

Rough Draft: Due January 30

Final Draft: Due February 1

Demo: February 1

Reading Assignments: by Tuesday

Shermer, Prologue

Online: [they see dead people](http://bit.ly/2DvjbhM) (<http://bit.ly/2DvjbhM>)

Homework Assignment 1

Forming Hypotheses

These homework assignments should be emailed to me before midnight on the dates given.

For this homework assignment, you will get practice doing three of the steps of making a scientific theory, namely,

- (A) Observation
- (B) Forming multiple hypotheses
- (C) Checking if your hypotheses are consistent with known facts

Professor Carlson will demonstrate his amazing psychic powers. He will offer one hypothesis about how he did these things. It is your job to come up with other hypotheses and do some preliminary investigative work. You will have to do (individual) written reports and a (group) oral presentation on what you have figured out.

Written Report:

Your written report should include the following information:

- (1) Exactly what was observed. This should be based on a written record which you make immediately after the demonstration, so you don't need to rely heavily on your (possibly unreliable) memory. It is important to record any failures of Professor Carlson as well as any successes.
- (2) Hypotheses about how it occurred. Professor Carlson will provide one (supernatural) explanation; you should come up with at least one other hypothesis about how it occurred.
- (3) Any evidence you can gather to support or discredit these theories. For example, if you think I controlled the psychoresonant vibrator by blowing on it, try doing it yourself. If you fail, this may discredit this hypothesis; whereas if you succeed, it would support it.
- (4) What your best guess is as to which the correct answer is. This can be based on a variety of considerations, such as plausibility, consistency with observations, the opinions of experts, and so on.

Some suggestions:

(A) Use experts! If you think the demonstration has something to do with physics, call up a random physics professor and ask him/her what you want to know. Wake Forest is filled with friendly, helpful faculty who will be glad to share their expertise. Remember to cite your sources (books or individuals) in your report.

(B) Magicians are experts at deception; if you think you have been deceived, ask a magician how it could be done. Professor Wayne Silver in Biology (336-758-5920) has done some amateur magic; perhaps he could help you.

(C) Try to duplicate the feat, if you can. If you think I did the mind reading by “cold reading,” try doing it with your friends.

Oral Presentation:

As a group, you will give a brief report (15 minutes total) on the results of your investigation. This presentation should include:

(1) A presentation either similar to or even more impressive than that of Professor Carlson. Ideally, you should leave Professor Carlson wondering “how did they do that?”

(2) Some of the hypotheses you formed about how Professor Carlson did what he did.

(3) What evidence you have that either indicates that these hypotheses are correct or incorrect.

(4) What your best guess is as to the correct hypothesis. If you are convinced that Professor Carlson is psychic, you should convince everyone else; if you think he’s a phony, try to prove that.