

to: Students of Physics 1 Practical Track
from: D. Politzer
subject: Scientific Ethics

The following is the text of a memo written by Jerry Pine, Prac Track developer and *ZAP!* co-author, early in the course history.

“At the end of the Spring term in 1992, two Physics 1 students conducted a survey of students’ ethical beliefs and behaviors with regard to Physics 1 labs and Chem 3a labs. Various forms of behavior in laboratory were listed, all to a greater or lesser degree dishonest. Five are listed here:

1. Not reporting data that didn’t fit expectations
2. Adjusting data to fit expectations
3. Reporting as yours data measured by someone else
4. Using someone else’s analysis
5. Fabricating data not measured.

“For Physics 1, 5% to 30% of students reported having exhibited these behaviors, 30% for number 1, 5% for number 5, and intermediate numbers for the rest.

“This year, I want to emphasize at the start that honesty in science is a fundamental requirement, without which there can be no science. We operate in the faith that we can believe the work of our fellow scientists, or we would be forever backtracking instead of progressing. We would be divided by suspicion instead of united in a search for truths. *We must be scrupulously honest, or we are not entitled to be scientists.*

“Coming from a world where cheating has become commonplace, it may be difficult for you to shift gears and meet the demands of science for honesty. The purpose of this note is to heighten your awareness of the issue so that in your lab work in Physics 1 you can act as a scientific professional, for whom any of the behaviors listed above would be totally unacceptable.”

I would only add two general comments. First, you only learn if you struggle with new ideas and challenges: it’s really impossible to avoid some tough going if you actually want to get somewhere. And second, in my experience, the grades you earn here are far less important to your future success than what you actually learn.