

Introduction to Research I *What to expect...*

Objective: Introduce students to the research process.

Activities:

1. The first day of Research, students will be asked their opinions of research. Discussion.
 - What do they think it encompasses?
 - Who, exactly, does research?
 - How long does it take?
 - Is there a set time limit?
 - How do people go about conducting research?
 - How do you analyze the data?
 - Are there ethics involved in research? What are the ethics?
 - Do you work alone or with others?

2. Next, the teacher will share his/her research experience(s).
 - I plan on sharing all of my research experiences starting with Developmental Biology research and ending with most recent research in engineering.
 - I plan on comparing both types of research (work in a micro lab virtually alone vs. work in a bigger lab with bigger materials and with 4 other people).
 - Share “toys” from research, ie. the concrete columns from engineering research and the CFRP. Share pictures from the summer.
 - Share research journal and explain that students will be expected to keep a similar journal throughout the course of their research.
 - Go over requirements in good record keeping. (blue/black ink, pencil, write everything down, keep all calculations / drawings / thoughts / etc. in notebook. When a mistake is made, draw a single line through the mistake, do not scribble over or white-out the mistake.
 - Explain to students that the research is more individual this semester, rather than group-oriented. Each student will do his/her own original research, with the help of the teacher or other mentor.

Homework: Explain why research is necessary in the advancement of society. Use specific examples.