- find a partner and a station
- cubbies across from here for your stuff
- 3 handouts up front

- Introductions
- 20.109 Philosophy
- Day-to-Day Workflow
- Semester-Long Workflow
- Lab Safety
- Self-/Guided Lab Tour
20.109: Promises and Expectations

authentic investigation
constructive feedback

deep attention
support your peers

this is a collaboration by us all
Day-to-day workflow

- Hand in current HW, get old HW back
- Announcements and/or HW discussion
- Quiz  1:10 sharp  2-3 Q  5-10
- Pre-lab lecture
- Lab work
  - See wiki
- Hand in notebook pages before leaving
From protocol to lab notebook

1. Begin by adding the correct amount of water to a 200 ul PCR tube. Add that amount +1 ul to a second PCR tube.
2. Next add the primers to each reaction. Be sure to change tips between additions.
3. Next add template to the first reaction tube.
4. Finally add PCR Master Mix to each tube, pipetting up and down to mix. Leave your tubes on ice until the entire class

Statement of purpose: Today we will design primers to delete 32 bp from the 5’ end of GFP and flank the sequence with new restriction sites. Then we will prepare truncated GFP by PCR as an insert for later cloning.

Design primers for GFP insert (M1D1 Part 1)
See attached Word document.

PCR to make GFP insert (M1D1 Part 2)

Added 27 uL H2O to expt’l, 28 uL H2O to control sample.
Added [1 uL] primer and [20 uL] Master Mix (last) to both samples, and 1 uL template to expt’l only!
Rxn ready at 3 pm → on ice → thermal cycler started at 4 pm.
Semester-long workflow

- Work in pairs
- Broader community collaboration
- Assessments
  - Minor: HW, quizzes, notebooks, participation
  - Major: reports and presentations
  - *Ask if something is unclear*
    - Available over email, occasional OH
  - *Plan ahead and manage your time*
Lab Safety

- Protection: gloves, glasses, coat
- Just in case... eyewashes, shower
- Hazards: chemical, biological, splash/irritant
- Waste disposal: 
  - Bio and non-bio
  - Broad definition
  - No solids or liquids
  - Bio. liquids → bleached, sick
  - Chem. liquids → hood
  - Men's sharp
  - Bio. waste
  - Solids O.K.
Time for demo and tour!