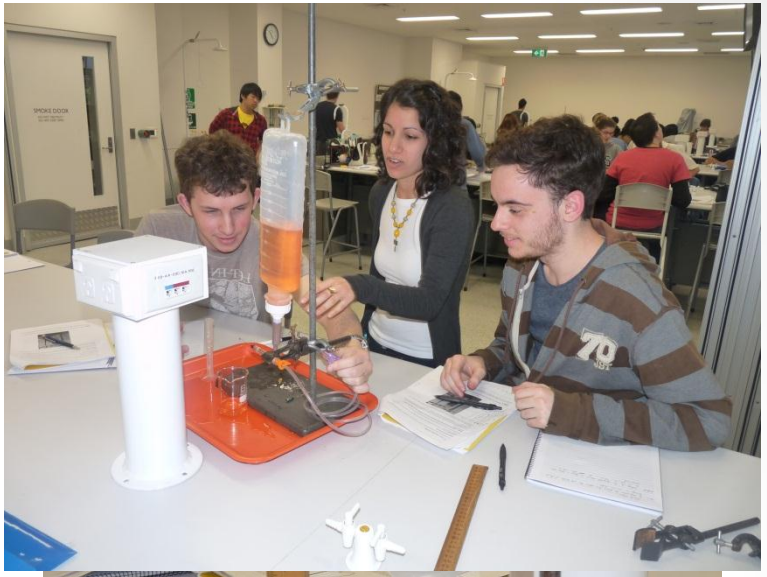
A student/demonstrator perspective of inquiry in a first year physics subject for non-physics majors

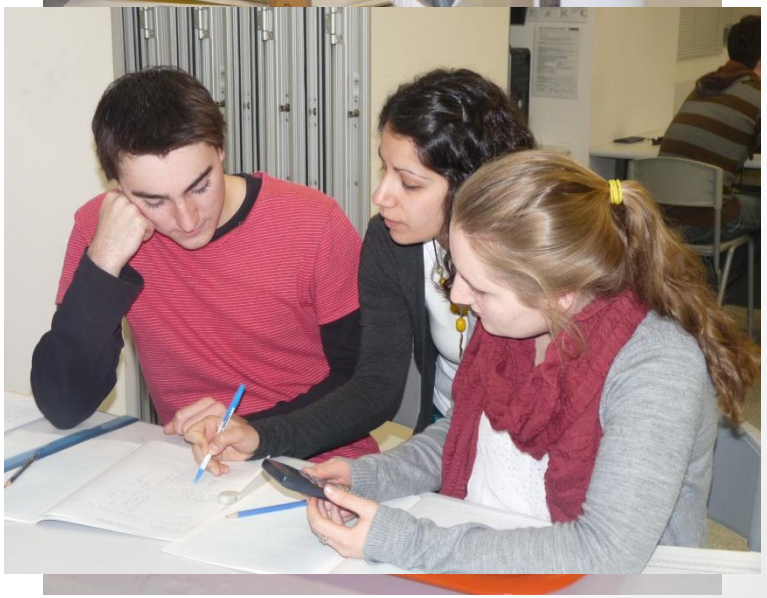
Rita Rapa

A typical physics inquiry based experiment

- ✓ Aim
- ✓ Materials
- ✓ Guidance!

- ***X*** Method (generally)
- ***X*** Results/conclusion





Benefits of inquiry-based experiments for students

- General science skills
  - Collating data
  - How to plan an experiment
  - Think independently
  - Can be engaging for students
  - A feel for what scientific research is about i.e. open- ended

Challenges associated with inquiry-based experiments for students

- Straight out of high school-throwing them in the deep end!!
- Having to figure out a method can be quite frustrating
  - Can be met with lack of motivation and interest
  - Demonstrators need to be able to guide students in right direction without doing experiment for them!

Some points to consider when planning/designing inquiry bases experiments

- Students often look for relationships between lectures and practicals
  - What's the point? Why are we learning this?
  - Needs to be relevant to subject material as well as stimulating
- Follow-up 'inquiry' skills in later subjects
  - 3rd year subject based on inquiry