Breakout Session 4

Pre and Post Lab

Pre and Post Lab

Ideal Pre lab

Familiarize the students with the lab experiment by:

a) Introducing concepts and theory

b) Practicing calculations/data analysis

c) Reviewing experimental steps/flow

d) Peaking student's interest in upcoming lab experience

Overall goal - prepare students for lab experience

Pre and Post Lab

Actual Pre lab

- students do not make connection between pre lab work and lab or post lab work
- Students do not learn from mistakes as pre labs are not marked before lab occurs
- Pre labs questions end up being busy-work that do not enhance the students lab experience and detracts from learning
- Pre lab does not engage students

Pre and Post Lab

Getting from Actual to Ideal

- Critically evaluate it
  - Less is more (decide what is important) don't dilute
  - Is the pre lab even needed?
  - Alternative approach: write skeleton report
- Correct it
  - Mark it and Provide feedback before
    - Electro-labo
    - Pre-provided answers

Pre and Post Lab

…Solutions continued

- Connect it

  To something familiar to students' everyday life:

  - » Calorimetry – which cools beer faster water at
  - » Debunking gadgets:
    - ***Get Electrified!™ with RustStop®***
    - ***The Original Miracle Thaw Defrosting Tray***
    - ***Coffee Joulies: temperature control for your morning cup***

Pre and Post Lab

- Post lab is an important tool for developing the skills of manipulating, analysis and presenting data…. What real Scientist do
- Most of the higher-level learning (integration and synthesis of ideas) happens in the post lab
- Problems with post lab felt to be related to pre lab issues