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