Documentation & Error Analysis
Student Learning Objectives

- #1 apply knowledge
- #2 design and conduct experiments
- #3 contemporary issues
- #4 broad education
- #5 multi-disciplinary teams
- #6 professional and ethical responsibility
- #7 communicate effectively
- #8 life-long learning
Documentation

- Objective = Title / Abstract
- Hypothesis = Criteria
- Procedure = Testing
- Results = Observations
- Discussion = Analysis
- Error Analysis
- Recommendations
Objective = Title / Abstract

- Similar to abstract
- Summarize “wow” factors
Hypothesis = Criteria

Before the experiment starts

- How will the experiment be conducted?
  - Who
  - What
  - Where
  - When

- What is going to happen?
- What are the expected results?
- How will success be determined?
Procedure = Testing

- Detail procedure before starting.
- Start procedure.
- Note any variations to procedure.
Results = Observations

- What is happening?
- Pictures, drawings, illustrations, etc.
- Record all observations.
- Avoid commentary.
Analysis

- Match to criteria.
- What was right?
- What was wrong?
- Why?
Error Analysis

- Define irrelevant factors.
- Describe all limitations.
- Use statistical analysis.
Recommendations

- What should be done in the future?
- What would have made the testing procedure better?
- How could error be minimized?
Documentation

- Title / Abstract
- Criteria
- Testing
- Observations
- Analysis
- Error Analysis
- Recommendations