Advanced Energy Vehicle

Lab11: Performance Test 3
AEV Project Objective  
(Problem Definition)

INITIAL CONCEPTS  
(Brainstorming)

EXPERIMENTAL RESEARCH  
(System Analysis)  
(Programming)

ANALYZE

COMPARE
  PT 1
  PT 2
  PT 3
  PT 4

RESEARCH

DESIGN DECISION

FINAL DESIGN

Present AEV Design
Rest of the Semester

PT3
- Improve energy efficiency in overall operational characteristics
- Energy optimization

PT4
- Final testing

CDR
- Final Configuration of the AEV and Documentation
Lab Objectives

- Focus on meeting the objective in the Mission Concept Review (MCR) while improving the energy efficiency. Focus on the energy usage of the AEV.

- Create the most energy efficient AEV and compare to Performance Test 1 & 2. Variables to think about changing:
  - AEV Design Layout
  - Arduino Code
  - Different Propellers
  - 3D Printed Part
Performance Test 3 – Lab Memo Requirements

- Run the AEV at least twice on the track and compare the energy usage and efficiency of the two variables.

- Did the team make a best attempt at making the most efficient AEV?

- Does the AEV design complete the scenario and stays in the design constraints listed in the Mission Concept Review.
Things to Remember

- Lab 10 Memo (Due: Lab 11B)
- Update Project Portfolio
- Extra Credit Video Part 2
- Start on CDR (Due: Lab 12C)
- Oral Presentations