

Water Rocket	Name	Team #
Rev 10.28.16 Evaluation: Not Included; Below Standards , Meets, Exceeds, Best Practices		
Introduction 8 Cover Sheet (include (Team #) 1 Problem Statement/Redefinition 4 Concept Map (technical and project) Design Brief 3 Summary of final design and construction Specifications/Constraints		
Scientific and Engineering Background: Theory and Principles 21 3 Description of forces 3 Application of Newton's Laws to flight 3 Effect of Forces on flight and design 4 Scientific Principles of NASA Simulator 3 Analysis of Strengths and Weaknesses of simulator 3 Description of physical changes during flight 2 Independent Research shown additional credit)		
Simulations/Analysis 32 4 Results Simulation Exploratory questions: Response, implications for design strategy) 4 Clear Statement of Strategy for initial round 4 Conclusions from individual round (include spreadsheet and narrative) 3 (Attach Individual Spreadsheets/Narratives as Appendix) 4 Final Round: Combine best individual simulations for starting points Additional simulations based on starting points 5 Final Round Simulations (include narrative, spreadsheet, and conclusions) 3 Clear statement (table) of Final design for comparison to constructed model 5 Narrative of analysis and conclusions of design		
Rocket Construction 26 4 Dimensioned diagram, neatly drawn and labeled, parts list 5 Comparison with Simulator design (Table) 3 Basis for compromises in construction 2 Photographs 4 Construction Quality (Flight worthiness) 1 Construction Aesthetics 2 Narrative of special techniques for construction (includes basis for construction compromises and attention to detail) 2 Stability consideration (Cp,Cg) 3 Analysis of strengths/weaknesses of constructed rocket Safety considerations		
Testing/Analysis) Procedure (including safety) 3 Results and detailed observations 3 Comparison with Simulator (Table) Analysis of Performance Differences		
Resources 2 For each source, list specifically the information was obtained Research No formal formatting required Specific contributions of others People Consulted—Project was intended to be done by each group alone.		
Report Quality 4 Easy to follow what was done Logically presented/well organized Discussion specific, complete and focused Consistent Units Quantitative where possible		
Self Evaluation 3 Your opinion of the design Self-evaluation: Discussion of how the device could be improved Details of why the project succeeded/failed Changes made to improve group dynamics		

(Weights are approximate)

