Water Rocket **Name** **Team #**

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Report Due: Friday 11/4 Beginning of 3rd Period. No exceptions, No extensions

Rev 10.28.16 Evaluation: Not Included; Below Standards , Meets, Exceeds, Best Practices

Introduction			
9			
	Cover Sheet (include (Team #)		
2	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			
4	Description of forces		
4	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 Simeulatory 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 Spradsheets/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		
3	Consruction Quality (Flight worthiness)		
2	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 (Not applicable 2016)			
	Procedure (including safety)		
	Results and detailed observations		
	Comparison with Simulator (Table)		
	Analysis of performance differences		
	and other factors that affect the comparison		
	Compare experimental with theory (Make the analysis complete)		
Resources			
3	For each source, list specifically the information was obtained		
	Research No formal formatting required		
	Specific contributions of others		
	People Consulted—The project was intended to be done by each group alone.		
Report Quality			
5	Easy to follow what was done		
	Logically presented/well organized		
	Discussion specific, complete and focused		
	Consistent Units		
	Quantitative where possible		
Self Evaluation			
4	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)
