ASEN 2004: Vehicle Design and Performance

Aero Lab Milestone 2 Individual Glider Design Concept

STUDENT NAME:

STUDENT LAB SECTION:

STUDENT LAB TEAM NUMBER:

EDITABLE POWERPOINT VERSION OF THIS TEMPLATE AVAILABLE ON CANVAS COURSE PAGE (LAB MATERIALS)

Aircraft Design Geometry and Key Parameters

- Tri-View of your final design with dimensions, Sref, Swet, Weight, and AR, stated (see Tempest example from Aero Lab Milestone 1 Data spreadsheet)

Aircraft Estimated Lift Curve and Whole Aircraft Drag Polar Analysis

- Estimated Lift Curve and Whole Aircraft Drag Polar Plots. Drag Polar Equation estimate should be explicitly stated on slide.

Table 1. Summary of Glider Prototype Requirements

(7 m launch height, 1.5 km Standard Atmosphere)

System Requirements	Threshold	Objective	Min or Max	MY DESIGN
Max Glide Range (meters)	70 m	100 m	Max	
Max Glide Range Velocity (meters/second)	12 m/s	7 m/s	Min	
Max Glide Endurance (seconds)	7 sec	10 sec	Max	
Maximum Wingspan (meters)	1.0 m	N/A	Max	
Unit Cost (Fake dollars) using the formula: Empty Weight (in grams) * $1 = Cost	No “limit”, but will be used as a discriminator between designs.		Min	