

BRPDS Project Rubric

Pre Launch Activities

	Below Basic Trainee	Basic Astronaut	Proficient Project Engineer	Advanced Project Leader- Astrophysicist
Payload Specifications Mass safety	<ul style="list-style-type: none"> • Payload mass >120g • Failed Safety test • Constructed with less than half standard materials 	<ul style="list-style-type: none"> • Payload mass 120 g • Marginally passes Safety Test • Constructed with 55% standard materials 	<ul style="list-style-type: none"> • Payload mass >120 g • Passed Safety test • Constructed with 80% standard materials 	<ul style="list-style-type: none"> • Payload mass >100 g • Passed Safety test • Constructed with 100% standard materials
Pre-launch Data: scale drawing	<ul style="list-style-type: none"> • Drawing roughly sketched, • Scale not used consistently, • Measures/ Units omitted or sporadic, • Drawings run together, • No graph paper used, • No labels, • No details identified 	<ul style="list-style-type: none"> • Plan drawn , • Two views: (i.e. Top, side) • Logical scale used, • Measurements given in real measure and units, • Payload detail and rocket on separate drawings, • Full size of paper not used • Some labels and details clearly identified 	<ul style="list-style-type: none"> • Plan neatly drawn with titles, • Two views: (top bottom side) • Logical scale used, • Measurements given in real measure and units, • Payload detail and rocket on separate drawings • Graph paper used, • Most labels and details clearly identified • Center of mass labeled 	<ul style="list-style-type: none"> • Plan neatly drawn with titles, • Multiple views: (top bottom side) • Logical scale used, • Measurements given in real measure and units, • Payload detail and rocket on separate drawings, • Full size of paper used, • Center of mass labeled • Center of Pressure labeled • All labels and details clearly identified
Center of mass Center of pressure	<ul style="list-style-type: none"> • Center of Mass not found or labeled on rocket • Center of Pressure not found • Stability test failed • Stability not signed by Launch director 	<ul style="list-style-type: none"> • Center of Mass found, labeled on rocket • Center of Pressure not found • Stability test passed marginally • Stability signed by Launch director 	<ul style="list-style-type: none"> • Center of Mass found, labeled on rocket • Center of Pressure found • Stability test passed • Stability signed by Launch director 	<ul style="list-style-type: none"> • Center of Mass found , labeled on rocket • Center of Pressure found , labeled on rocket • Stability test passed • Stability signed by Launch director

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Post Launch Activities

	Below Basic Trainee	Basic Astronaut	Proficient Project Engineer	Advanced Project Leader- Astrophysicist
Budget	<ul style="list-style-type: none"> Includes costs of some materials included using standard rates Costs included for final design incomplete 	<ul style="list-style-type: none"> Includes costs of most materials included using standard rates Costs included for final design and NO materials used in prototypes Purchase orders no complete 	<ul style="list-style-type: none"> Includes costs of all materials included using standard rates Costs included for final design and NO materials used in prototypes Purchase orders filled out fully and totaled 	<ul style="list-style-type: none"> Includes costs of all materials included using standard rates Costs included for final design and any materials used in prototypes Cost overruns are less than 10% of budget Purchase orders filled out fully and totaled Positive profit
Post launch Calculations and Analysis Report	<ul style="list-style-type: none"> Little to no Analysis or flawed in basic science 	<ul style="list-style-type: none"> Analysis and calculations of all most data Scattered Analysis 	<ul style="list-style-type: none"> Analysis and calculations of all required data Organized Analysis Formulae shown 	<ul style="list-style-type: none"> Analysis and calculations of all required data Organized Analysis Uses tables and diagrams when appropriate and explained why selected
Launch Results: Height and Accuracy	<ul style="list-style-type: none"> Two standard deviations below norm for maximum height attained More than one standard deviation above norm for accuracy 	<ul style="list-style-type: none"> Within one standard deviation above norm for maximum height attained Within one standard deviation of norm for accuracy 	<ul style="list-style-type: none"> Above one standard deviations above norm for maximum height attained More than one standard deviations below norm for accuracy 	<ul style="list-style-type: none"> Two standard deviations above norm for maximum height attained Two standard deviations below norm for accuracy
efficiency cost/m	<ul style="list-style-type: none"> Bottom 10 Percentile 	<ul style="list-style-type: none"> Between 10 - 36% Percentile 	<ul style="list-style-type: none"> Top 11-37% Percentile 	<ul style="list-style-type: none"> Highest 10 Percentile
profit as	<ul style="list-style-type: none"> Large loss (>50%) compared to contract award 	<ul style="list-style-type: none"> Mild loss less than 50% compared to contract award 	<ul style="list-style-type: none"> Loss is within 10% compared to contract award 	<ul style="list-style-type: none"> Made profit compared to contract award
Post launch Presentation	<ul style="list-style-type: none"> Little organization demonstrated Few speaking skills observed Few member participates Visuals are small or used inappropriately 	<ul style="list-style-type: none"> Organization needs work Not all speaking skills observed Most member participates Visuals are marginally sized 	<ul style="list-style-type: none"> Organization is fair Not all speaking skills observed Most members participates Visuals are sufficiently sized 	<ul style="list-style-type: none"> Organization is excellent Speech volume is good, Eye contact made Every member participates Visuals are appropriately sized

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