



PENNSYLVANIA TSA
ALUMNI ASSOCIATION
<http://patsa.org/alumni/>

Judging Sheet, Scoring Materials & Feedback Form Example

PA TSA Alumni Association Scoring Sheet Development Examples

High School Dragster Rules Compliance Evaluation

Student ID Number	
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Drawing

Criterion	Yes	No
Drawing Submitted with Dragster?		
Sheet is Not Larger than B Size Paper?		
The Drawing is Full Scale (1:1)?		
Single Sheet Drawing Only (vs. Multiple Sheets)?		
Drawing Identified by Student Number (and ONLY)?		
Drawing is Two View (Top and Side)?		
Drawing is Dimensioned in Metric Units?		

Safety

Criterion	Yes	No
Dragster is Safe to Race?		

Dragster Body

Criterion	Yes	No
[DB1] One-Piece, All-Wood Construction?		

Criterion	Under Minimum	Meets Spec	Over Maximum
[DB2] Body Length: 200mm - 305mm			
[DB3] Body Height Including Wheels: Maximum 75mm	NA		
[DB4] Body Mass (w/o CO ₂): Minimum 50g			NA
[DB5] Body Width at Both Axles: 35mm - 42mm			
[DB6] Total Width Including Wheels: Maximum 90mm	NA		

Axles, Axle Holes, Wheelbase

Criterion	Yes	No
[A1] Dragster Has Exactly Two Axles?		

Criterion	Under Minimum	Meets Spec	Over Maximum
[A2] Bottom of Axle Bearing Above Car Bottom: 5mm - 10mm			
[A3] Center of Rear Axle Hole to Back of Dragster: 9mm - 100mm			
[A4] Wheelbase (Center to Center): 105mm - 270mm			

Bearing, bushing and lubricants may be used. Glue may be used to secure only the bearings to the body, not wheels to axles.

Spacer Washers & Axle Clips

Criterion	Yes	No
[S1] Dragster Has a MAXIMUM of 8 Spacer Washers?		
[S2] Dragster Has a MAXIMUM of 8 Axle Clips?		
[S3] DOES NOT Contain ANY Glues or Adhesives? (Other than as noted above)		

High School Dragster Rules Compliance Evaluation

Power Plant (CO₂ Cartridge & Hole)

Criterion	Yes	No
[P1] Hole is Parallel to Race Surface with Inside NOT painted?		
[P1] Inside of the Power Plant Hole is NOT painted?		

Criterion	Under Minimum	Meets Spec	Over Maximum
[P2] Chamber Depth: 48mm - 54mm			
[P3] Safety Zone Thickness: Minimum 3mm			NA
[P4] Chamber Diameter: 19mm - 20mm			
[P5] Chamber Bottom to Race Surface (w/ Wheels): 26mm - 40mm			

Eye Screws

Criterion	Yes	No
[ES1a] Dragster Has Exactly Two Eye Screws?		
[ES1b] Eye Screws DO NOT Contact the Racing Surface?		
[ES1c] Eye Screws Are Located Along Dragster Center Line?		
[ES1d] Eye Screws Are Closed to Prevent Departure From Track String?		

Glue may be used to reinforce the eye screws. All adjustments must be done prior to the event check-in.

Criterion	Under Minimum	Meets Spec	Over Maximum
[ES2] Eye Screw Inside Diameter: 3mm - 5mm			
[ES3] Eye Screw Separation (Center to Center): 150mm - 270mm			

Wheels

Criterion	Yes	No
[W1a] Dragster Has Exactly Four Wheels?		
[W1b] All Four Wheels Contact the Racing Surface?		
[W1c] All Four Wheels Roll?		
[W1d] Wheels are Entirely Made of Plastic?		
[W1e] Wheels are round with constant radius?		

Criterion	Under Minimum	Meets Spec	Over Maximum
[W2] Front Wheel Diameter: 32mm - 37mm			
[W3] Front Wheel Width: 2mm - 5mm			
[W4] Rear Wheel Diameter: 30mm - 40mm			
[W5] Rear Wheel Width: 12mm - 18mm			

NO REPAIRS BY STUDENTS OR ADVISORS WILL BE ALLOWED AFTER THE CAR HAS BEEN CHECKED-IN. The only exception to this is that minor repairs may be made at the discretion of the judges if the car becomes damaged during the race due to an error.

All CO₂ Cartridges will be provided by the competition organizers.

Notes & Comments

High School Dragster Design Subjective Evaluation

Student ID Number	
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Dragster Appearance [15 Points Total]

Criterion	Judge 1	Judge 2	Judge 3
Finish is DRY with NO Excessive Oils/Waxes/Etc [0 – 3]	0 1 2 3	0 1 2 3	0 1 2 3
Finish of Dragster is In Good Taste (Not Offensive, etc) [0 – 2]	0 1 2	0 1 2	0 1 2
Quality of Workmanship on Dragster Itself [0 – 4]	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Quality of Dragster Paint/Finish Work [0 – 4]	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Discretionary Points [0 – 2]	0 1 2	0 1 2	0 1 2
Individual Judge Totals [0 – 15]			

Drawing Accuracy [15 Points Total]

Criterion	Judge 1	Judge 2	Judge 3
Top View Accurately Represents Shape of Dragster [0 – 2]	0 1 2	0 1 2	0 1 2
Side View Accurately Represents Shape of Dragster [0 – 2]	0 1 2	0 1 2	0 1 2
Body Width Dimensioned (Correctly) [0 – 1]	0 1	0 1	0 1
Body Length Dimensioned (Correctly) [0 – 1]	0 1	0 1	0 1
CO ₂ Cartridge Chamber Depth Dimensioned (Correctly) [0 – 1]	0 1	0 1	0 1
CO ₂ Cartridge Chamber Dia. Dimensioned (Correctly) [0 – 1]	0 1	0 1	0 1
Front Axle Location Shown, Dimensioned (Correctly) [0 – 1]	0 1	0 1	0 1
Rear Axle Location Shown, Dimensioned (Correctly) [0 – 1]	0 1	0 1	0 1
Eye Screw Locations Shown, Dimensioned (Correctly) [0 – 1]	0 1	0 1	0 1
Wheels Shown, Dimensioned (Correctly) [0 – 1]	0 1	0 1	0 1
Discretionary Points [0 – 3]	0 1 2 3	0 1 2 3	0 1 2 3
Individual Judge Totals [0 – 15]			

Drawing Skills [10 Points Total]

Criterion	Judge 1	Judge 2	Judge 3
Drawing Contains Title Block with Entry Number [0 – 1]	0 1	0 1	0 1
Drawing Uses Appropriate Line Styles and Widths [0 – 1]	0 1	0 1	0 1
Drawing is Dimensioned in Metric Units [0 – 1]	0 1	0 1	0 1
Drawing is NOT Over-Dimensioned [0 – 1]	0 1	0 1	0 1
Drawing Neatness [0 – 2]	0 1 2	0 1 2	0 1 2
Drawing Shows All Appropriate Details [0 – 2]	0 1 2	0 1 2	0 1 2
Discretionary Points [0 – 2]	0 1 2	0 1 2	0 1 2
Individual Judge Totals [0 – 10]			