

Science Olympiad 2016-2017 Season

Hovercraft Checklist / Data Sheet

Version 1.0

Event and Construction Requirements

- ☐ 1. Competitors construct only 1 vehicle
- ☐ 2.a. Reference materials secured in 3 ring binder
- ☐ 2.c. Vehicle and box are labeled and impounded
- ☐ 2.d. Competitors must wear eye protection during set up and testing of the vehicle.
- ☐ 4.b. Vehicle length is ≥ 15.0 cm and ≤ 30.0 cm, and height < 20.0 cm
- ☐ 4.c. Vehicle mass is ≤ 2000.0 g
- ☐ 4.e. Vehicle has ≤ 2 propellers and 2 motors
- ☐ 4.e. Propeller(s) shield holes $< 1/4$ " in diameter
- ☐ 4.f. Vehicle is ≤ 19.5 cm in width
- ☐ 4.g. Vehicle has $1/4$ " dowel < 5.0 cm from front edge with top ≥ 30.0 cm and ≤ 35.0 cm above bottom
- ☐ 4.h. Only commercial batteries ≤ 9.0 V used. No other energy used or stored.
- ☐ 4.h. No circuit exceeds 9.0 V
- ☐ 4.i. No brushless motors or ICs except those embedded into commercial fans
- ☐ 4.j. Vehicle is levitated
- ☐ 4.k. Vehicle has electric switch to start
- ☐ 4.l. Competitors must be able to answer questions about the vehicle per the Building Policy

Part I: Written Test

Exam Score _____

Vehicle Data

Vehicle Mass (≤ 2000.0 g) _____

Penalties

No successful runs	Y	N
DQed for unsafe operation or no device	Y	N
Construction violations corrected	Y	N
Missed impound	Y	N

Team Information

Team #: _____

Team Name: _____

Competitor Names: _____

Successful Run 1

Competitors touch vehicle before passes finish line	Y	N
Timer #1 (nearest 0.1 s)	_____	
Timer #2 (nearest 0.1 s)	_____	
Timer #3 (nearest 0.1 s)	_____	
Run Time (Middle value of above)	_____	

Successful Run 2

Competitors touch vehicle before passes finish line	Y	N
Timer #1 (nearest 0.1 s)	_____	
Timer #2 (nearest 0.1 s)	_____	
Timer #3 (nearest 0.1 s)	_____	
Run Time (Middle value of above)	_____	

Team Verification

5.s. I verify this sheet correctly records my team's vehicle testing data.

Competitor Name _____

Signature _____