

Regional Science Olympiad 2010 - Battery Buggy B

This is to be used with the excel spreadsheet found at www.soinc.org

Team Number: B___ Team Name: _____

Student Names: _____ Final Score: _____

Do not write below this line.

Construction Requirements

- | | | |
|---|---|---|
| 1. Electrical energy used is stored in commercial batteries with labeled voltage | Y | N |
| 2. Uses ≤ 4 individual 1.5 V cells or 1 single 4.8 V battery pack on the vehicle at a given time | Y | N |
| 3. Only stored battery energy is used to propel the vehicle | Y | N |
| 4. Only uses battery from item 2 above and/or non-electric energy storing devices used for any functions other than propelling | Y | N |
| 5. Electric components used are limited to batteries, wires, motors, switches, resistors, capacitors, and mechanical relays. | Y | N |
| 6. Only non-electrical sighting device is used | Y | N |
| 7. Vehicle's wheel base (distance measured parallel to the direction of travel between the center of rotation of the front and rear axle) is 26.0 ± 2.0 cm | Y | N |
| 8. Vehicle's width (distance measured perpendicular to the direction of travel between the outermost side of the left and right tire of the widest axle) ≤ 19.0 cm | Y | N |
| 9. Vehicle has a stationary, pointed object extending forward of all other parts of the vehicle to within 1 cm of the track's surface | Y | N |
| 10. Only the wheels contact the floor or tape at any time | Y | N |
| 11. Participation Only (if both runs failed or if buggy cannot complete a run within the allotted 10 minutes) | Y | N |
| 12. Disqualified (notify the team and their coach as soon as possible) | Y | N |

Run Requirements

- | | | | | | | | |
|--|--|-----------|--------------|--------------|--|--------------|--|
| 13. Vehicle, batteries and all interchangeable parts are impounded before start of competition | Y | N | | | | | |
| | <table border="0"> <tr> <td></td> <td style="text-align: center;">Run 1</td> <td></td> <td style="text-align: center;">Run 2</td> <td></td> </tr> </table> | | | Run 1 | | Run 2 | |
| | Run 1 | | Run 2 | | | | |
| Team does not roll the vehicle on or adjacent to the track surface between the start and finish line prior to or during the competition. | 14. Y | N | 25. Y | N | | | |
| If a target is used, it is removed before the start of the run | 15. Y | N | 26. Y | N | | | |
| Students do use a pencil, pen, or dowel to activate the switch | 16. Y | N | 27. Y | N | | | |
| Students do not push the vehicle to get it started it nor follow their vehicle down the track | 17. Y | N | 28. Y | N | | | |
| The entire vehicle, including batteries, moves forward together | 18. Y | N | 29. Y | N | | | |
| Distance from fixed point to center of target line in millimeters (to the nearest millimeter) | 19. _____ | | 30. _____ | | | | |
| Measured Time in seconds (to the closest 0.01 second) | Timer 1 | 20. _____ | 31. _____ | | | | |
| | Timer 2 | 21. _____ | 32. _____ | | | | |
| | Timer 3 | 22. _____ | 33. _____ | | | | |
| Center tape remains completely within the vehicle's track until finish line | 23. Y | N | 34. Y | N | | | |
| Fail Run: vehicle travels in the wrong direction or vehicle inadvertently begins a run | 24. Y | N | 35. Y | N | | | |
| 36. Target Distance in meters (between 5 and 10 meters with 0.5 meter increment) | | | | _____ | | | |