

Solar Sprint Guidelines

The awards categories are:

- **SPEED** 1st, 2nd and 3rd Place, **“The Race”**
- **ENGINEERING** 1st, 2nd and 3rd Place, **“Best Design”**
- **CREATIVITY** 1st, 2nd and 3rd Place, **“Most Innovative”**

[Rubric](http://bit.ly/SolarSprint19) can be accessed at: <http://bit.ly/SolarSprint19>

About the Race Track:

Each race lane might be 60 cm wide and 20 m long (concrete). The guide wire will be located in the center of the lane. The wire will be a small diameter line, such as a fishing line (e.g. 60# test monofilament). There will be no free end on the guide wire, thus the cars must be hooked onto the wire, not strung onto it.

Car Design Guidelines

A. Solar panels cannot be shaved, drilled, or delaminated. Only the motor supplied in the kit can be used. Motors cannot be re-wound, lightened, or disassembled (motors and solar panels must be used as supplied). If an evaluation group convened by the event coordinator determines that the solar panel and/or motor have been modified, the car and team will be disqualified from the competition.

B. One (1) solar panel (limited to a maximum output of 3.2W), and one (1) motor (limited to a maximum 3.0 VDC) are allowed per car.

Reflectors, supports, and power leads can be added to these components as needed. Energy-enhancing devices, such as mirrors, must be firmly attached to the vehicle. The remainder of the vehicle can be innovative in design and materials.

C. The vehicle must be structurally sound without the solar panel attached. The solar panel cannot be used as the chassis, or body of the car. The axles and wheels cannot be directly attached to the solar panel. The remainder of the vehicle may be made from any other materials. The vehicle may not be larger than 30 cm. (11 $\frac{3}{4}$ in.) wide by 60 cm. (23 $\frac{5}{8}$ in.) long by 30 cm. (11 $\frac{3}{4}$ in) high.

D. The team is encouraged to decorate the body of the car. Also, using a coffee straw, attach a flag to the back of your car with your school Abbreviation and car # (Please select your car number here)

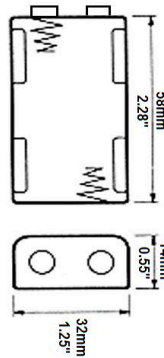
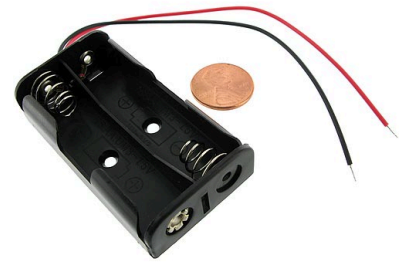


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E. Construction of race car entries must be started and completed during the current program period.

F. The sun's light is the only energy source that can be used to power the vehicle. Batteries, capacitors, flywheels, or any other energy storage devices are prohibited.

G. If the sun's energy is judged insufficient by the event coordinator, a battery pack and two (2) AA 1.5 V batteries will be furnished for each team. Therefore, the model's motor power leads must be readily accessible for easy attachment to a battery pack. Make sure to leave space in your car structure for the battery holder.



H. Steering

1. A student-designed attachment device must be attached to the car to accommodate a guide wire. A guide wire, such as fishing line, will be no more than 1.5 cm from the surface of the track. It will go through the attachment device (such as an eyelet) attached to the car and serve as a steering mechanism to keep the car in its lane without disconnecting the guide wire. The vehicle must be attached to the guide wire by a minimum of 1 attachment point. Both ends of the guide wire are fixed to the track. This is the only allowable method of steering the car. [Watch this video on how to install a hook on the solar car.](#)
2. No radio control is permitted in the car.
3. Lane changing or lane crossing will result in a Did Not Finish (DNF) standing. A car whose race is impacted by an out of control vehicle will be allowed an opportunity to run the race again.
4. A car that lacks steering control and interferes with other cars in other lanes will not be allowed to race again.

Resources:

<http://bit.ly/SolarSprintResources>