

Judging Guide: Qualifications

Materials List and Specs

Required Materials	Prohibited Materials/Practices
<ul style="list-style-type: none"> • Provided motor • Provided Pitsco Ray Catcher (2.76 V) Solar Module • Switch (any that is safe-not provided) • Battery Holder • 2 AA Batteries • 1 red LED (*MS Only) 	<ul style="list-style-type: none"> • Any vehicle deemed unsafe by any judge (note-utilities are experts in electrical safety!!) • Additional power sources beyond what is included (and required) • Modifying power sources • Tampering with motor (re-wound or disassembled) • Additional purchased materials beyond \$10 (receipts for purchased materials must be included in documentation in notebook) • The solar panel cannot be used as the body of the vehicle. • The solar panel cannot be altered (drilled, sanded, or cut)
In the Kit-ES	In the Kit-MS
<ul style="list-style-type: none"> • 1 Photo Voltaic Module (Pitsco Ray Catcher Solar Module, 2.76 V, 1A) • 1 small DC Motor (Pitsco Motor 280) • 1 2-AA battery holder • 2 rechargeable AA batteries • 2 metal axles • 4 rubber bands (2 thick, 2 thin) • 8 gears (2mm hole) • 8 gears (1/8" hole) • 4 nylon spacers • 4 wheels (2 large, 2 small) • 2 balsa wood sheets • 1 solar panel blank (cardstock) • 12 pack mini alligator clip leads • 2 small metal alligator clips • 2 screw eyes 	<ul style="list-style-type: none"> • 1 Photo Voltaic Module (Pitsco Ray Catcher Solar Module, 2.76 V, 1A) • 1 small DC Motor (Pitsco Motor 280) • 1 2-AA battery holder • 2 rechargeable AA batteries • 2 metal axles • 4 rubber bands (2 thick, 2 thin) • 8 gears (2mm hole) • 8 gears (1/8" hole) • 4 nylon spacers • 4 wheels (2 large, 2 small) • 2 balsa wood sheets • 1 solar panel blank (cardstock) • 12 pack mini alligator clip leads • 2 small metal alligator clips • 2 screw eyes • 3 red LEDs *

Vehicle Specifications for Qualification

- Vehicle size: maximum length of 38 cm, width of 30 cm, and height of 30 cm.
- The solar panel cannot be used as the body of the vehicle
- The solar panel cannot be altered (e.g. drilled, sanded, or cut)
- Vehicles must be powered by 2AA batteries provided on the day of the challenge. The batteries must be connected to a working switch that can be turned off. The solar panel is not required to be connected to the on/off switch.
- There must be an available 5cm square of free space for team number sticker.
- Middle school teams must include a minimum of 1 red LED in their design that lights up when the vehicle is running.