

Pack 38 Cubmobile Rules

1. Each Den will build one Cubmobile. The participants will all race in their Den Cubmobile.
2. Wheels must not exceed 10 inches in diameter. All wheels may only be equipped with solid rubber tires.
3. Car frame is made from 2-by-4-inch construction lumber.
4. The overall length of the car is a maximum of 5 feet; the wheel base a maximum of 4 feet. The outside circumference of the wheel may vary from 30 to 36 inches.
5. Use roundhead 1/4-inch bolts to hold frame. Screws are a second choice. Nails are not suitable, because they may work loose.
6. All cars must have a seat with braced backrest, so the Scout can comfortably steer with his feet.
7. Steering is done with the feet, which are placed on the front axle, and by the hands holding a rope fastened to the front axle.
8. If threaded axles are used, the nuts must be secured with cotter pins or wire.
9. Cars must be equipped with an adequate safety belt securely fastened to the main frame of the car.
10. Cars must be equipped with a handbrake with its rubbing surface faced with a rubber material such as a strip of an old tire. This will stop the car when dragged on the ground.
11. During a race, the two 2-by-4-inch blocks fastened 1/16th inch from the centerboard will limit the turning radius. (Very important to test this before the race!)
12. The maximum weight of the Cubmobile may not exceed 45 lbs.
13. All participants must wear a helmet (bike, motorcycle, etc.) and shoes that cover the whole foot. The participants must wear either long pants or kneepads if shorts are worn. Elbow pads and gloves are also recommended.
14. Each Scout will be allowed 2 competitive runs, one in each lane. Winners are based on the average time of each Scout. Awards will be given for 1st, 2nd, and 3rd place in each division and 1st, 2nd, 3rd, and 4th place overall.
15. If a Cubmobile stops for any reason before the finish line it is considered an incomplete race and the participant is not given a timed score.
16. A Cubmobile may not be pushed by any means during a race. When the driver

touches the ground for any reason their run is ended at that point and is not given a times score.

17. Cubmobiles that are damaged during the race may be repaired in the "pit", however major modifications will not be allowed after registration.

18. An inspection will be held one week prior to the race to check cubmobiles for mechanical soundness. A pre-race inspection will also be held. Any cubmobile found to be mechanically unsound will not be allowed to race. DO NOT USE NAILS!!! Use carriage bolts/nuts or lag screws. NAILS WILL NOT HOLD UP TO THE STRESSES INVOLVED WITH THESE CARS!!!!

19. Cubmobiles will be judged for Best Paint and Most Innovative design. The cubmobile does not have to strictly follow the diagram provided. It DOES have to be mechanically sound. Creativity is highly encouraged. We also encourage this to be done as a Den project. All of the boys should have a hand in the design and construction of their Cubmobile. An award will also be presented to the den with the lowest average time.

20. There will also be a sibling race, siblings may race in the car built by their respective families' Den.

21. The ruling of the judges is final on all matters concerning the event.

I have found a highly recommended source for Cubmobile wheels. Any wheel may be used, but these have been proven to be very sturdy and safe for building a good Cubmobile.

Comtech 2000 has a series of wheels that's PERFECT for Cubmobiles - the "861" series:

- 8" Diameter
- 1" Wide Rubber Tread Molded over Plastic Hub
- Load Capacity: 100 Lbs
- Choice of Hub Widths
- Sealed Precision Bearings!!!
- 861-1.5 is a High-Volume Production Wheel** (translates into lower cost to purchase)
- We buy the 861-1.5 with **special 3/8" (inside) Diameter Bearings** so that we can use a 3/8" Lag Bolt
(much stronger than the 5/16" Lag Bolt that you would use with standard bearings)

Here is their contact info:

Website: <http://www.comtech2000.com/>

Telephone: 419-459-4414

E-mail: comtech2000_1999@yahoo.com

