



Space Derby Rules

Cub Scout Pack 131 – DeKalb Official Space Derby Rules

1. Overview – “Just what is a Space Derby?”

The Space Derby is a rubber band powered rocket race that is designed to be a parent-Scout project. Please feel free to give guidance and minimal assistance to your Scouts as they build their Space Derby rocket, appropriate to their age. This is a chance for your Scouts to enjoy the spirit of friendly competition with their peers. These “Official Space Derby Rules” are written to help you keep it simple and fun for your child, and to know what to expect when it comes time to race your rocket.

2. Ground Rules for Participation – “Who can race?”

Here are our participation guidelines:

- a. The race is open to all Cub Scouts and Webelos Scouts registered to Pack 131.
- b. If there is sufficient time and interest, there may be a Siblings Race for siblings that have purchased a rocket kit (kits are provided to registered Scouts).
- c. Each Scout may enter only one rocket in the competition. They should have a significant level of participation in building their rocket (designing, sanding, gluing, painting, decorating, etc.).
- d. The rocket must have been built during the current program year (the school year in which the Space Derby is held). Rockets that have competed in a previous derby are not permitted. Official kits will be distributed by the Pack.

3. Rocket Specifications – “Are there rocket building rules?”

To ensure that the race is as fair as possible, all rockets must be made from the BSA Space Derby kits. However, the materials supplied in the kit can be modified or added to somewhat. On every rocket, all the materials provided in the kit must be used in the rocket construction with the exception of the number stickers. Also, no other form of propulsion besides the rubber band and propeller provided is allowed. Here are some additional rocket construction details to be aware of:

- a. Body: Do not shorten or lengthen the body from the kit. Doing so will affect your rocket’s ability to fly and may disqualify your rocket. Rockets may be painted, stained, or otherwise decorated.
 - b. Fins: Wings, a tail, or other fins may be added to the rocket, however they may not extend more than 2 inches beyond the radius of the propeller.
 - c. Propeller: The propeller provided with the kit must be used without any alterations beyond sanding to remove any loose plastic and balance the propeller.
 - d. Rubber Bands: Use only official BSA rubber bands, supplied in the kit. Rubber bands may be lubricated so that they unwind easily. Rockets may only use 2 or 3 rubber bands at a time.
 - e. Decorations/Additions: Decorations such as crew, lasers, etc. may be added. All such decorations must be firmly fastened to the rocket, and may not be placed so as to extend the rocket’s length or prevent the rocket from flying on the track. Painting is encouraged!
 - f. Follow the assembly instructions carefully, including location and alignment of the hanger, notching the back for the dowel, covering the wire hook with the red liner, and attaching the propeller and bushing properly.
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4. Inspection and Registration – “What must I do to enter my rocket?”

Before the race begins, all participating “Pilots” must check-in with their rockets. Here are the pre-race check-in details:

- a. Before a rocket may compete in the derby, it is subject to a technical inspection, to verify that it meets the prescribed specifications (see 3. Rocket Specifications above for details). If a problem is noted, the Pilot may be asked to correct it before the rocket is registered.
- b. When the rocket passes inspection, it is then registered along with the rocket Pilot’s name (the scout’s name).
- c. **Registration cutoff will be 10 minutes before race start time. Please plan to arrive on time so you can get your rocket registered.**

5. Competition – “How will the race be run?”

Every race has to have rules, and ours is no exception. Here’s what to expect:

- a. Once all rockets are registered, the competition brackets will be seeded with four rockets racing in each heat.
- b. Each race heat will involve four lanes of equal lengths of wire track (approximately 20ft long).
- c. Leaders will wind each rocket's propeller 100 times and load them on the track.
- d. The race heat begins once the all rockets have been loaded onto the track and the official starter announces "GO!" A leader will then launch all four rockets simultaneously.
- e. The first rocket to reach the finish line (the opposite end of the track) is the winner of that heat. The finish line official(s) will have the final say in determining the winner.
- f. Rockets will earn points for their finish position in each race: 4pts for 1st place, 3pts for 2nd place, 2pts for 3rd place, and 1pt for 4th place. Rockets do not need to reach the end to score points, but rockets that make it closer to the end will place higher than rockets further back.
- g. If a rocket is damaged during a race and can be repaired in a reasonable amount of time (a few minutes), the race may be run again at the discretion of the judges. Any non-functional decorations that fall off during competition will NOT be reattached during racing.
- h. After each rocket has raced four times rockets will receive a score based on the sum of all four of their races. The top four rockets will then race one final time in randomly determined lanes to determine a winner.
- i. Unsportsmanlike conduct by any participant or spectator (including Akelas) may be grounds for expulsion from the competition and/or the race area. Please remember children take sportsman-like or unsportsman-like attitudes from their parents and leaders.

6. Rewards and Recognition – “What do we win?”

The most important values in Space Derby competition are parent/Scout participation, good sportsmanship and learning how to follow rules. But there will be some rewards!

- a. First, second, and third place racers will be recognized with awards.
- b. Awards will be given based on voting for your favorite rockets based on six categories: Most Creative, Fastest Looking, Most Alien, Most NOT Like a Rocket, Most Colorful, and Best in Show.
- c. Each participant will receive a ribbon or patch.

Good Luck!
