



Regional 2020-2021 Contest Catalog

CO2 DRAGSTER and DESIGN (California ONLY) (Virtual)

Contest Description

This contest is open to all SkillsUSA California members currently enrolled in middle school through high school (7–12th grade). The SkillsUSA California CO2 Dragster Competition is designed to promote enthusiasm and motivation through hands-on experiences and competition. Key concepts of design, woodworking skills, measuring skills, and accurate record keeping are combined to advance the goals of SkillsUSA. Contestants will be required to take an online exam and submit electronic copies of their portfolio and drawings of CO2 dragster in lieu of an in-person competition.

Regional Competition

The competition will consist of the following two components:

1. Portfolio Assessment
2. Drawing Assessment
3. Knowledge Exam

Please note: a physical CO2 dragster will not be submitted for the regional contest.

Students will complete an online exam on **January 23, 2021**. The schedule will be emailed to the advisor/contestants by Friday, December 11, 2020. Changes cannot be made to scheduled time slots. Students must submit their Portfolio, drawings and resume to SkillsUSA CA by **January 23, 2021** (details to follow).

Portfolio Assessment

1. The notebook is a tool for students to document their designs prior to the competition. It can include pictures, sketches, detailed assembly instructions, etc.
2. Notebook should be submitted in PDF form and not exceed **10** pages.

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Drawing Assessment

The drawing will be assessed based on the following criteria:

Neatness- The overall appearance of the drawing is pleasing. The use of mechanical drawing tools is evident.

Scale - The drawing is to scale and labeled as such. The spacing of borders and views are appropriate. The dimensions are accurate.

Completeness - The drawing has a border and title block. The drawing has a top view and side view along with dimensions.

SkillsUSA California Dragster Specifications for Portfolio & Drawings

Note: a physical dragster will not be submitted for the regional contest

- 1) The dragster must have a weight of 2.5 oz or more (without CO₂ cartridge)
- 2) Weight may be added to the body so long as it is not deemed unsafe. Doing so will lead to fewer points awarded in the design and construction evaluation criteria.
- 3) The completed dragsters maximum overall length will be no greater than 12.000 inches. Its minimum length will be no less than 8 inches.
- 4) The completed dragsters maximum overall width will be 3.75 inches. Its minimum width will not be less than 2.500 inches.
- 5) The dragster must have a cartridge hole depth of 2.000 inches.
- 6) The dragster must have a cartridge hole diameter of .750 inches.
- 7) The cartridge hole may be relatively loose or tight due to the nature of wood. Judges discretion will apply to safety.
- 8) The height of the cartridge hole (measured from the track surface to the center of the hole) must be 1.300 inches minimum, 1.700 inches maximum.
- 9) The dragster must have a minimum of .125 inches of wood around the cartridge hole. Nothing but the back of the cartridge hole should be exposed.
- 10) The dragster must have two screw eyes, each located on the centerline of the dragster, with a minimum of 4.000 inches between the screw eyes.
- 11) The dragsters body must be one continuous piece of solid or laminated wood of sufficient strength to withstand racing.
- 12) Bearings, bushings, and lubricants may be used in the construction.
- 13) The dragster must have at least three wheels.

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- 14) The wheel's maximum diameter will be 2.000 inches; minimum diameter will not be less than 1.000 inch.
- 15) The wheel's maximum width will be .800 inches. The minimum width of the wheels will not be less than .062 inches.
- 16) Wheels must be made of plastic or rubber.
- 17) Nothing but the wheels may touch the track surface. The body and eyelets should be clear of the track and must pass over a dime when laid flat.

Student Materials List

- a. Portfolio
- b. Drawing
- c. One-page Resume (SkillsUSA format)

Clothing Requirements

Official Dress is NOT required for Regionals. Clothing must be unbranded with no words, images, or logos. SkillsUSA or SkillsUSA California attire is recommended.

Note: Check the National Contest Guidelines and/or the updates page on the SkillsUSA website and the SkillsUSA California Competitive Events page:

- www.skillsusa.org/compete/updates.shtml
- <https://www.skillsusa.org/competitions/skillsusa-championships/contest-descriptions/>
- <https://www.skillsusaca.org/competitive-events-2>

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