



Tech Wars 2019

**Niagara County
Community College**

Competition Category: Cardboard Chair Competition

Level of Competition: High School

Event Coordinator: Mike Lepkyj mlepkyj@medinacsd.org

Objective of Competition: Design the most efficient chair!

This activity asks your group to design and build a full-sized chair from corrugated cardboard, glue, and or tape. The chair must support a person that is selected by the team for at least 5 minutes. The person seated will be in a “comfortable” position with his / her back leaning against the back of the chair.

Rules of Competition:

COMPETITION COMPONENTS

1. Chair Efficiency = Weight of Person divided by the Chair Weight (High numbers are best).
2. The back angle will be measured where the seat and back meets (between 10 and 15 degrees).

MATERIALS

1. Untreated corrugated cardboard
2. Adhesive of team's choice
3. Tape

RULES FOR CONSTRUCTION

1. The chair must have a seat and a back with an angle between 10 and 15 degrees.
2. No non-cardboard mechanical fasteners will be permitted.
3. Glue of any type is accepted.
4. The seat of the chair must be at least 16” from the floor (measured to the bottom of the seat).
5. The top of the back must be no less than 30” from the floor.
6. If any of the above criteria are not met, your design will be automatically disqualified.

TESTING CONDITIONS:

1. Each chair will be weighed and the weight will be recorded.
2. Each team should identify a “tester” prior to arriving to the competition. This person will be weighed and the weight will be used to determine the chair’s efficiency.
3. The tester must be sitting comfortably with his/her back resting on the back of the chair.
4. Once the “tester” is comfortably seated in the chair, the timer will begin. If the chair withstands the allotted time, your chair is then compared by the weight.