

Middle School  
& High School

# CARSLAND



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**Skills:**

- Teamwork**
- Problem solving skills**
- Critical thinking**
- Logical thinking**
- Initiative**

Descripción de las acciones del reto:

Se acerca la competencia de Fórmula 1 en Austin, por tal motivo debemos preparar a nuestra escudería para la gran carrera.

Description of the challenge:

The Formula 1 Competition in Austin is close, so we have to get our team ready for the race!

Instructions of the game:

Assemble all the parts of our racing car and place it on the exit ramp before the other team to reach the finish line first.

The racing car consists of 4 pre-built parts that must be assembled in the place of the competition to participate in the race.

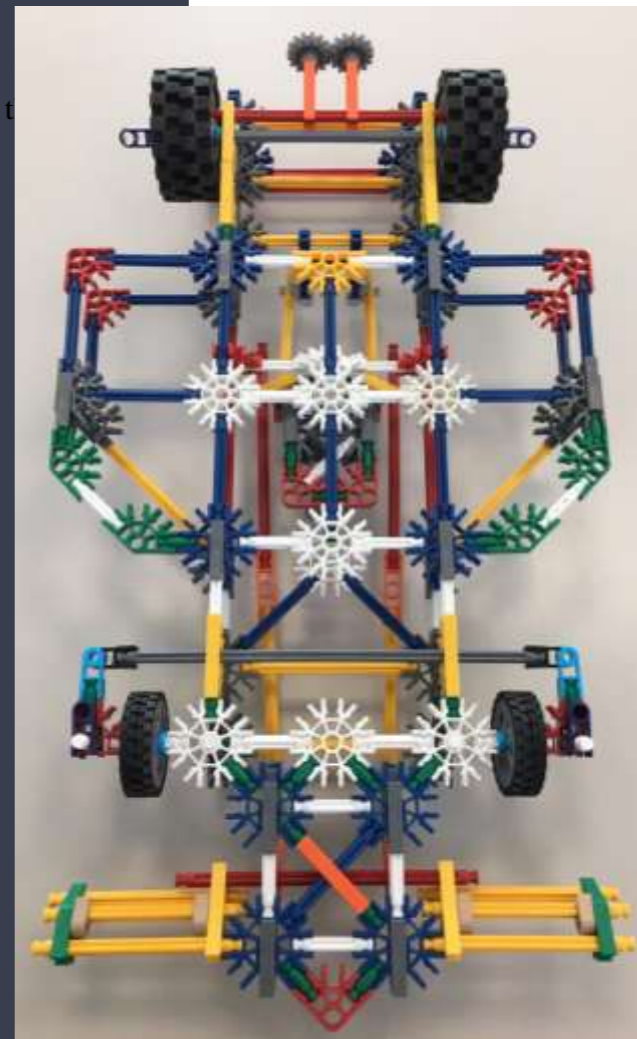
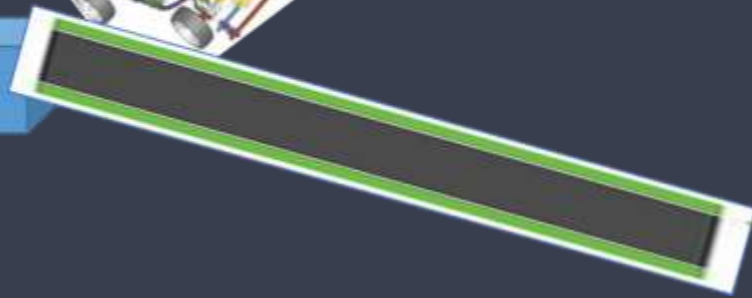
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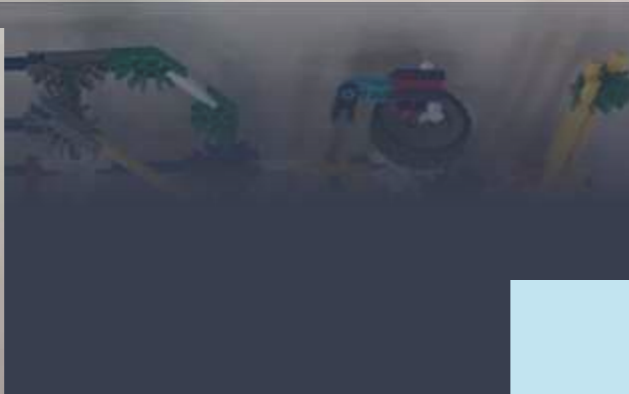
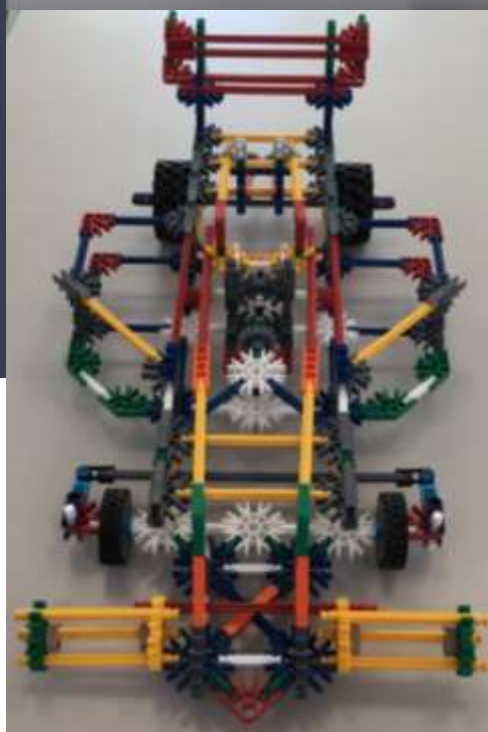
Estación 1

Estación 2

Estación 3



An image is presented to show the vehicle that must be assembled by the team.



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Team members per group:  
5 students per group

Design restrictions:

-The racing car must be built according to the design shown in this competition call.

Important: the racing car whose design isn't based on the shown one won't be able to participate in the competition. Modifications on the design won't be accepted, however, to improve the movement some of the traction components can be altered.



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## Description of the challenge:

The racing team must stop at each of the 3 workstations to assemble their car. The activities to perform on each workstation are the following:

Workstation 1: assemble the front and rear drive train.

Workstation 2: connect the rear wing.

Workstation 3: assemble the front wing.

Exit ramp: place the racing car on the competition track and release it to travel the trajectory.

Note: the team members choose on which stations they work; at least 2 students must participate on workstations 1, 2 and 3.

A maximum of 2:30 minutes will be granted per round, in this given time, the teams must assemble and place their cars on the exit line.

Restrictions: the racing car can't be released on the racing track if it isn't completely assembled



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**Note: the team that rotates the roles of the members on each round will be granted 20 extra points.**

Scoring:

Car completely assembled= 15 points

- 5 points – drive train
- 5 points – rear wing
- 5 points - front wing

First place (to reach finish line) = 10 points

Second place (to reach finish line) = 5 points

Team members' roles:

Member 1: responsible for workstation 1.

Member 2: responsible for workstation 2.

Member 3: responsible for workstation 3.

Member 4: responsible for placing the car on the racing track.

Member 5: must help in the first three workstations.



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# Second Stage

- Build a car that can travel 12 meters as fast as possible. The competition considers distance and speed.

Car characteristics:

The car must be constituted exclusively of K'Nex material, except for the material needed for the propulsion system, which is made out of standard rubber bands. The objective is that the rubber bands propel the car.

Only rubber wheels with a 5 cm rim can be used.

There are no restrictions on the amount of pieces and wheels.

Maximum dimensions: 55 x 35 cm, there is no restriction on the height.

**Note: THIS LAST VEHICLE MUST BE COMPLETELY BUILT BY THE TIME OF THE COMPETITION.**