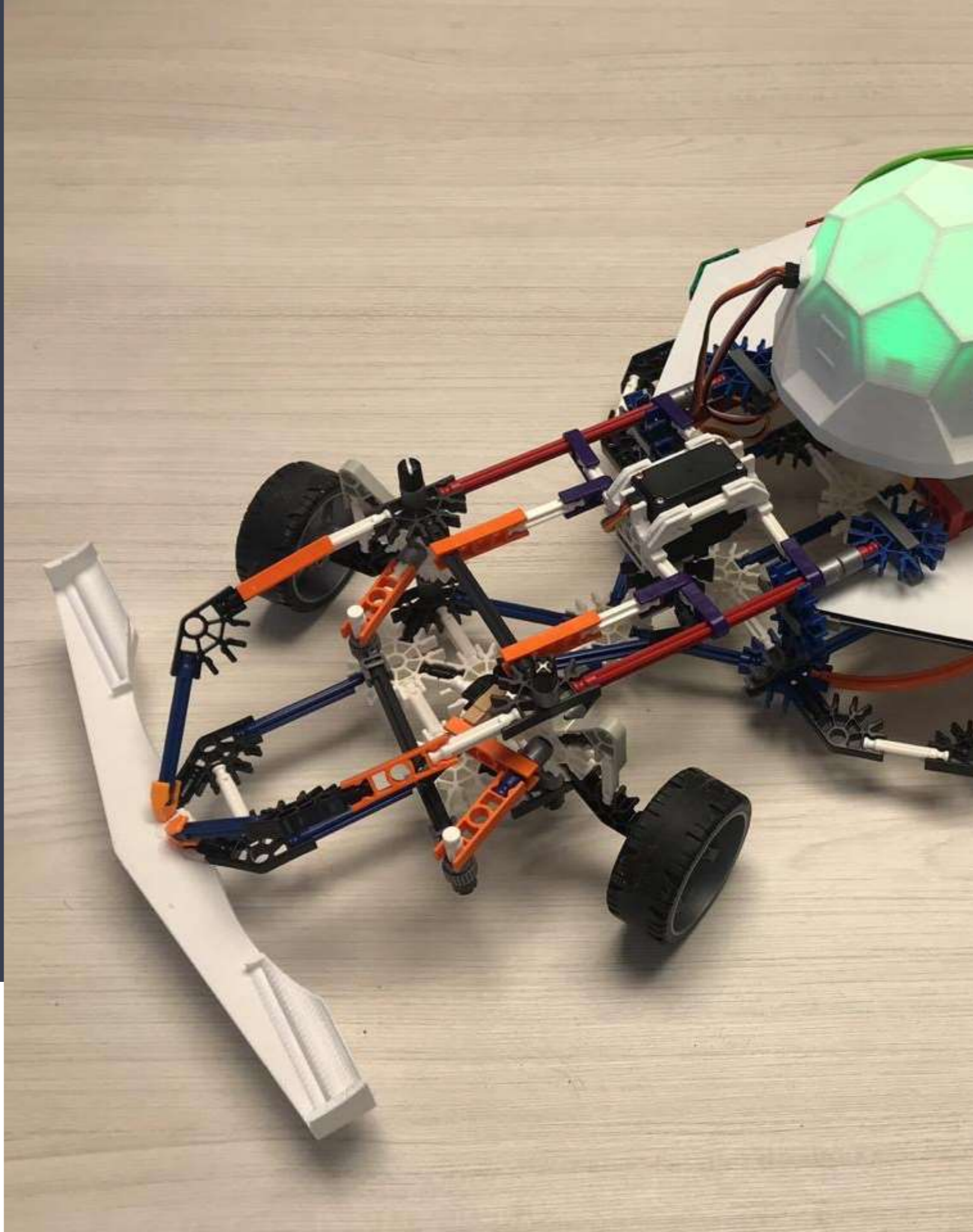


Upper Elementary

speed Race



Competencies to be develop throughout the robotics program:

Speed race

- Gets to know the five types of simple machines.
- Understands the operation of the simple machines.
- Aware of his/her own work and the necessity of going over it.
- Curious about deepen on the topics.
- Uses the materials properly.
- Strives to reach his/her goals.

Description of the challenge:

Build a vehicle that can travel the racing track while making pit stops to fix and change any car parts needed.

Team members per group:

Five students, each team member must be in its pit zone to make changes on the vehicle.

Design restrictions:

The car must be built exclusively by 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.

Maximum dimensions: 20 cm width x 30 cm long x 20 cm height.

Remember the topic of the challenge is Formula 1, so teams are invited to be creative on the design; paper and fabric can be used for the decorations. A special prize will be granted for design and creativity.

Speed race

Game materials:



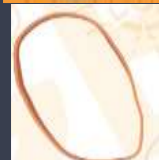
- Yellow gear



- Small rubber tire



- 2 in big wheel



- Rubber band

Challenge description:

The challenge consists in students modifying the vehicle with all four game materials listed, yellow gears, big tire, big wheel and rubber band. Students will wait in their pit zones marked throughout the circuit. (Illustration)

The time for each lap is 2:30 minutes or less.

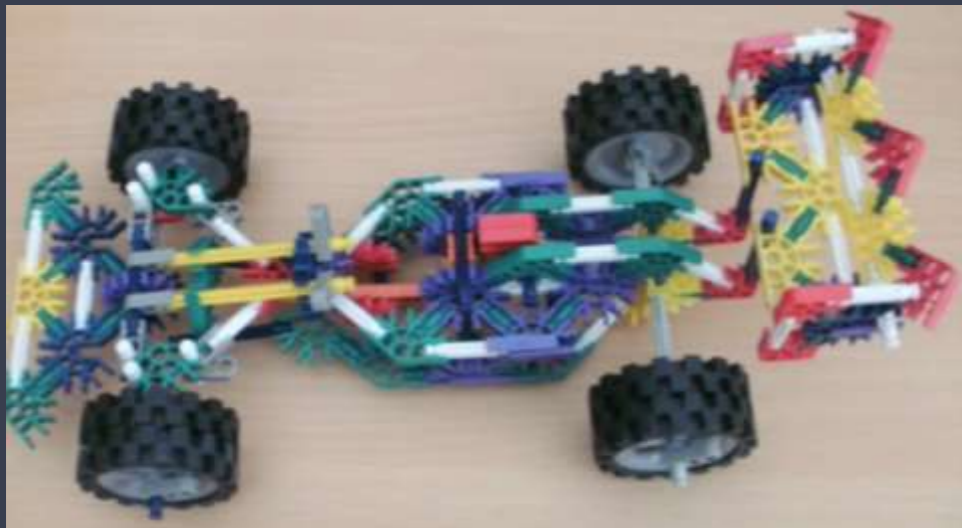
Each team should decide the order in which they make every modification, since there will be different textures on the circuit that must be taken into account in order to succeed on getting to the next stop.

Textures:

Sandpaper, acetate, cloth, felt, canvas.

Court dimensions:

2.4 m long by 2.0 m wide



Scoring:

- 1 point for every piece change completion
- 1 point for finished circuit
- 2 bonus points for first place

