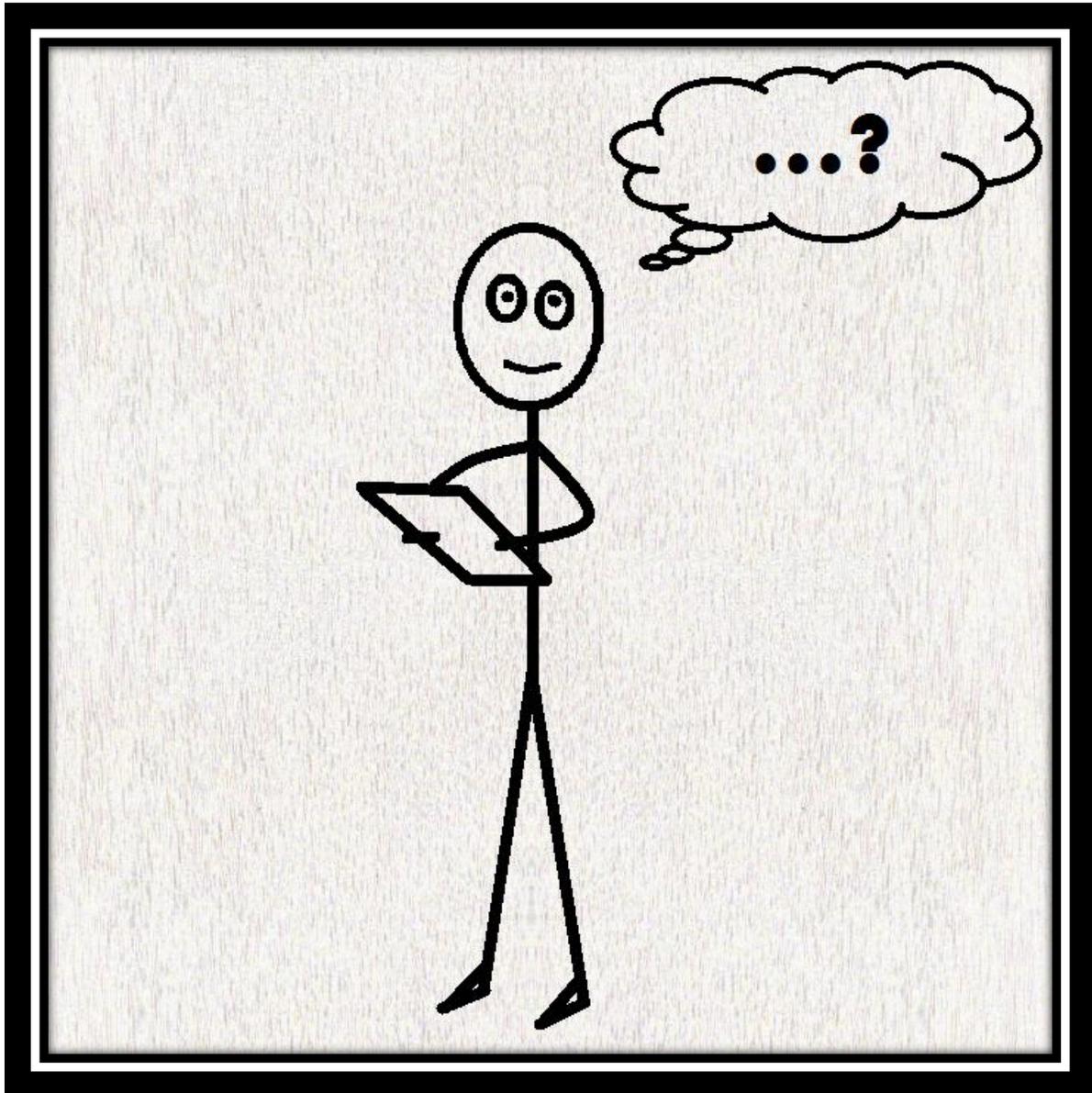


RECF team educational video- Attack the Sack by 820 Delta tech.

You and group of your friends want to join Vex Robotics. You have made a team, bought robot parts, what's next? You need a guide that will help your team to build a robot. Here comes the "Attack the Sack" video we made. In our video we illustrated the key steps to achieve better and more efficient results when building a robot. Those steps are useful not only for the Sack Attack Competition; they will help you to succeed in future challenges as well.



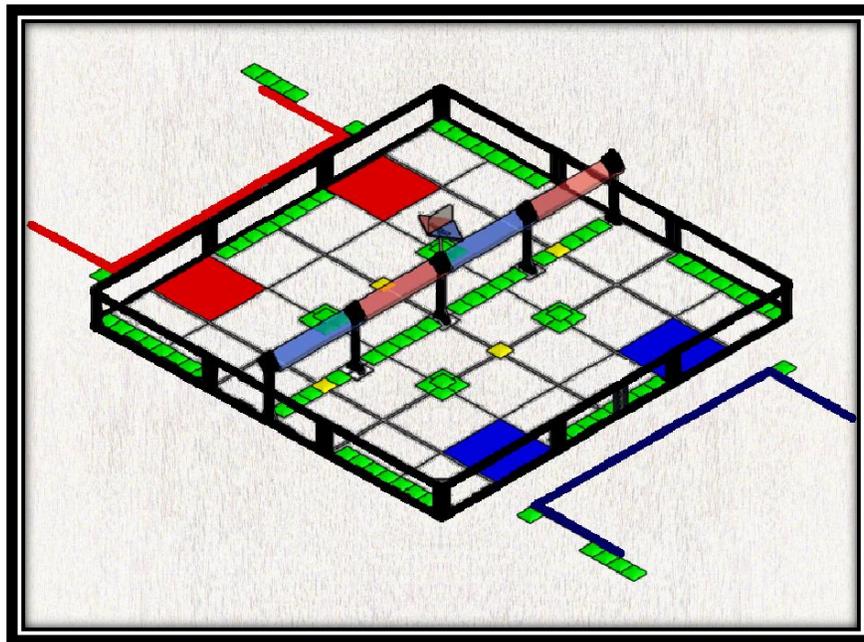
Steps for success:

1) Understand and analyze the game

First and most important step in any Vex Robotics Competition is knowing what is the game about. How does the field look? What are the rules? What is the objective of the game? What are the possible challenges?

In Vex Sack Attack Competition

The field looks like this:



Rules:

- Actions allowed and not allowed in the game.
- You get X amount of points for scoring green and bonus sacks into different goals.
- Time for autonomous and driving mode.

Objective:

- Score as many sacks as possible onto the floor goal, trough or high goal.

Possible challenges:

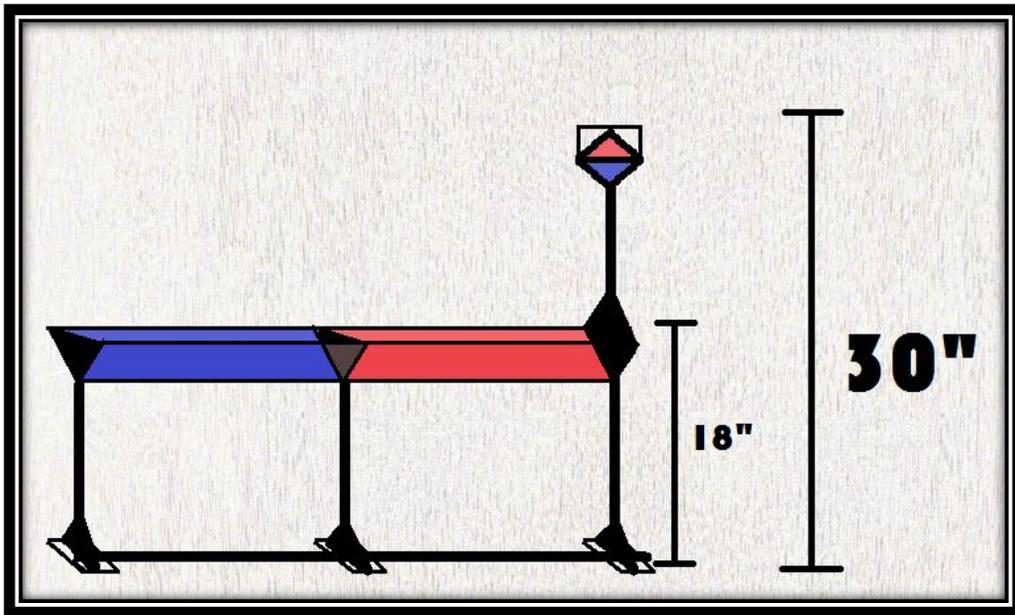
- Driver skills
- Manoeuvring of the robot
- Sacks caught in the wheels.

2) Make a requirement list for the robot

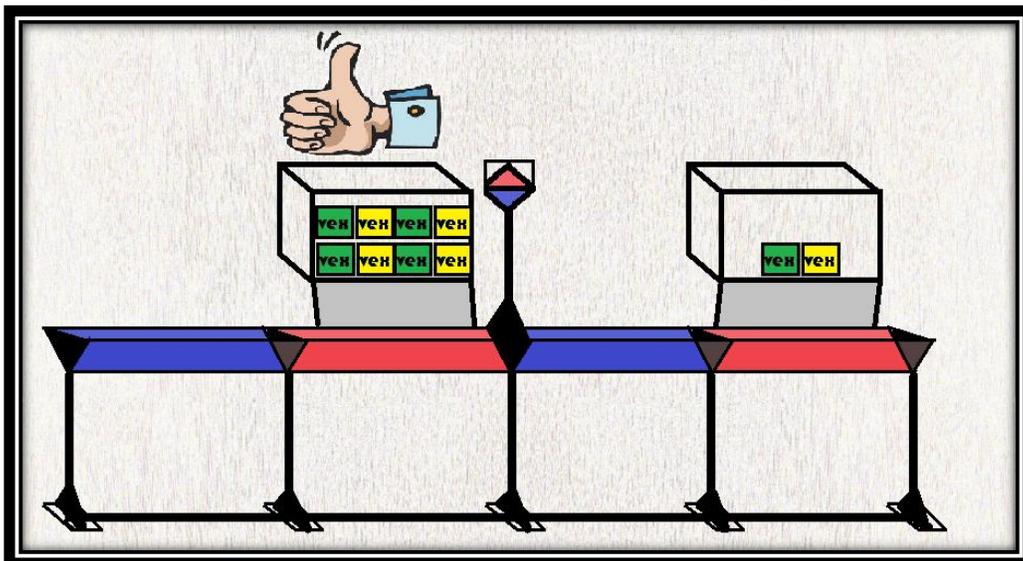
The next step is to make a list of the characteristics for the robot based on the game.

Requirement list for the robot in the Vex sack Attack competition

- Control
Robot should easily maneuver on the field.
- Score Sacks
Robot should pick up sacks and score them on any of the goals (preferably on trough and high goal, as you get more points).

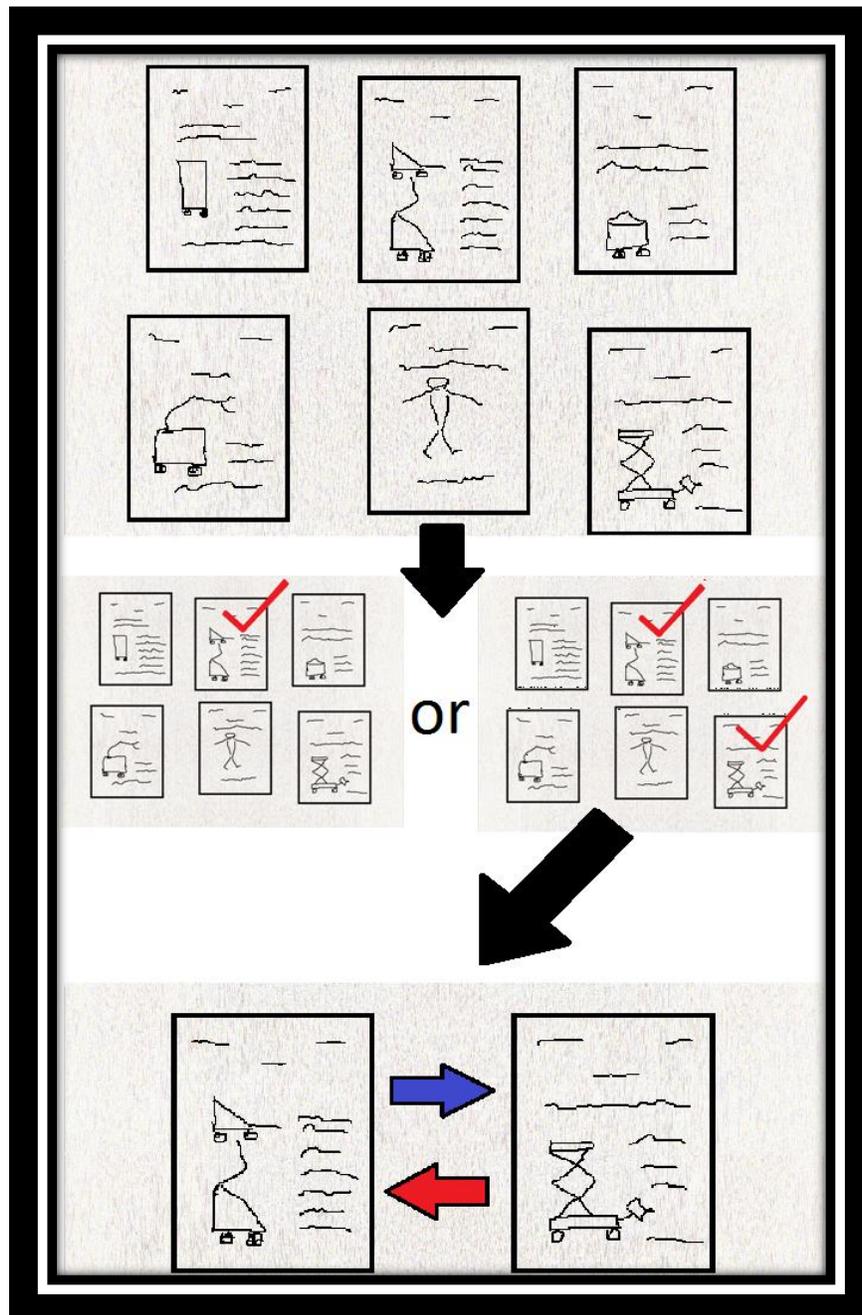


- Sack load
More sacks at once will give a more efficient scoring process.



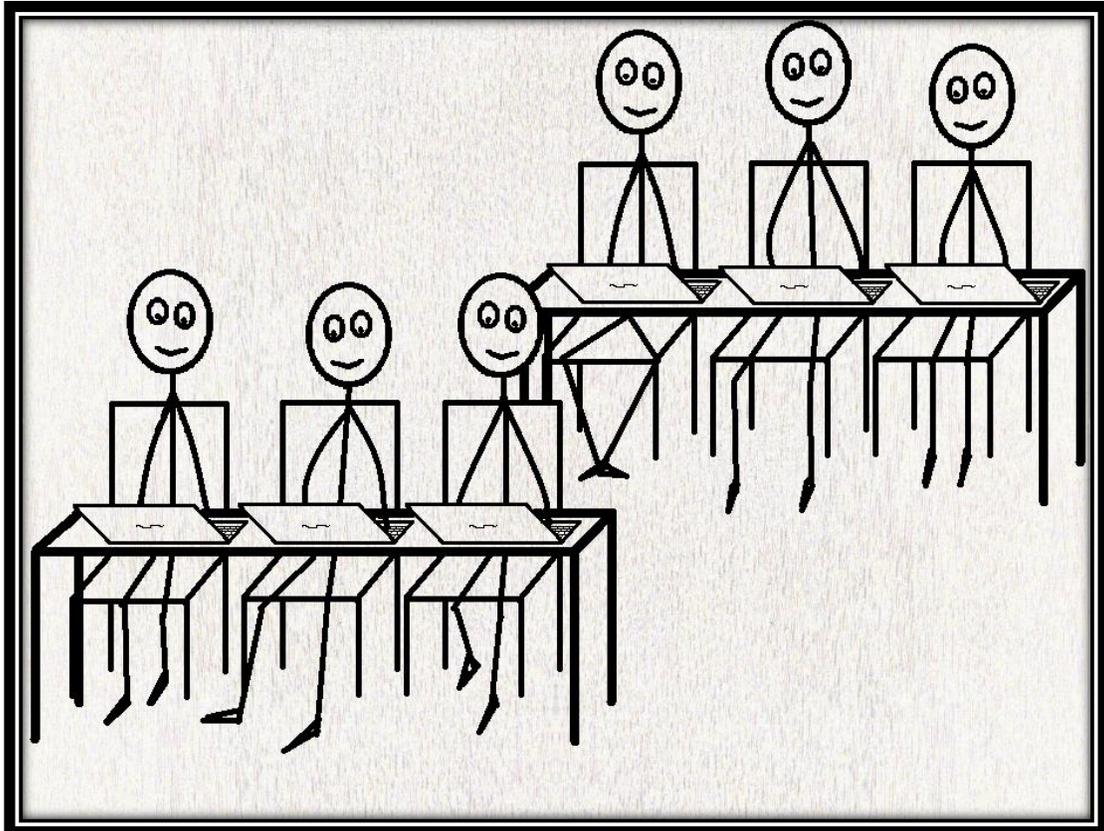
3) Brainstorm

Your team decided which characteristics you want your robot to have, now is the time come up with ideas. Everyone on the team should sketch their own robot design. The more ideas your team has, the greater are the chances of having an excellent design. Then the team can decide which idea is the best. If there are several great ideas, you can build more than one robot or combine the ideas to make a better design.



4) Design

Your team now can use 3D computer program, for example AutoCAD, to design a robot. You better separate the work among your team for more sufficient results. Let half of the team design the base of the robot, while the rest of teammates take care of the scoring arm. This will allow your team to be time efficient.



5) Build

Now is the time to bring the 3D robot on your computer to life. Carefully read the safety rules, before building the robot. You should work as a team and split the work among group members to save time.



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You have successfully built a robot. Now practice driving the robot, modify the robot as needed. You are now ready to compete in Vex Robotics Competition.

