

VEX Robotics Competition – Sack Attack

- 1) Robot is a well-crafted, unique design solution, demonstrating creative thinking
- 2) Team has demonstrated a highly creative design process and methodology
- 3) Team has committed to ambitious and creative approaches to playing the game
- 4) Teamwork and interview quality

Design Award

The Design Award is presented to a team that demonstrates an organized and professional approach to the design process, project and time management and team organization. At the 2013 VEX Robotics World Championship only teams that have previously won an Excellence or Design Award will be eligible to sign up for an interview time slot. Teams eligible for this award at World Championship will be assigned a 10 minute time slot during which the team will set up and deliver a presentation to judges. The winning team will be able to describe how they implemented an efficient and productive design process to accomplish the project goals.

Design Award - Engineering Notebook

One of the primary missions of the VEX Robotics Competition is to help students acquire real world life skills that will benefit them in their academic and professional future. The Engineering Notebook is a way for teams to document how the VEX Robotics Competition experience has helped them to better understand the engineering design process while also practicing a variety of critical life skills including project management, time management, brainstorming and teamwork. The Engineering Notebook requirement of the Design Award has no specified format; each notebook should be created through a concerted effort by a team to document their design decisions. Throughout the season, many larger events will send their Design Award winner to World Championship, and as a result, teams should start their notebooks early and update them often. At the 2013 VEX Robotics World Championship, only teams that have kept Engineering Notebooks will be eligible for the Design Award.

Engineering is an iterative process. Iteration requires a student to recognize and define a problem, brainstorm and work through various stages of the design process, test their designs, continue to improve their designs, and continue the process until a solution has been identified. During this process, students will come across obstacles, encounter instances of success and failure, and learn many lessons. It is this process that students should document in their Engineering Notebook.

Additionally, the Engineering Notebook is an opportunity to document everything a team does so that it can serve as a historical guide of lessons learned and best practices. Students may include a plethora of things in their Engineering Notebook including: team meeting notes, design concepts and sketches, pictures, notes from competitions, biographies of team members (students, teachers and mentors), team members' observations and thoughts, team organization practices, and any other documentation that a team finds useful.

Judging of Engineering Notebooks

Creating and maintaining an Engineering Notebook is in no way “required or mandated” for teams participating in the overall VEX Robotics Competition. Although the Engineering Notebook is not required, maintaining an Engineering Notebook is highly recommended because the process can have many benefits for the team. For instance, the development of technical writing skills is a valuable tool to acquire. There is only one award given at the VEX World Championship (and some local events) which requires teams present their Engineering Notebook to the judges - the Design Award. However, all teams are encouraged to create an Engineering Notebook and bring it to events to show and discuss with Judges. If an event has scheduled judging sessions teams should bring their engineering notebook to the session. Judges are always interested in learning and seeing the various skills students acquire and demonstrate through their participation in the VEX Robotics Competition. Teams are welcome to bring support materials, flyers, team promotional materials and items such as an Engineering Notebook to events to share with judges. It is encouraged that all members of a team contribute to this project throughout the season.

Key Criteria:

- 1) Engineering Notebook is a clear, complete document of the team’s design process
- 2) Team is able to explain their design and strategy throughout the season
- 3) Team demonstrates personnel, time and resource management through the season
- 4) Teamwork and interview quality