Medina Valley Robotics Club
Syllabus

The Medina Valley Robotics club is a group of students with teacher and mentors that are interested in robotics. The club is part of a larger program that includes SA BEST and BEST Robotics Inc. BEST Robotics Inc. was established in 1997 as a national non-profit organization whose purpose is Boosting Engineering, Science, and Technology among precollege students. The BEST program is designed to teach teamwork, problem solving, project management, and pride in task completion within the constraints of a short time period and limited physical resources. Club membership is open to all interested students, and participation is without fee to the students or the schools. This year, more than 400 schools are competing in BEST at 20 hub sites in Texas, Alabama, Arkansas, Illinois, Kansas, Kentucky, New Mexico, and Oklahoma.

The Medina Valley Robotics club is active throughout the majority of the school year. The major effort and resulting time demands on the members in during the fall of the school year. This years club has had already had several planning, and technical sessions. This is to get the club ready for Kickoff on September 14, at which time the nature of this year's game is explained. The club then has six weeks to design, prototype, test, and build a robot to compete against 31 other schools from the South Texas area. The SA BEST competition will be held on October 26 at St Mary's University. Depending on how well we do in this competition the club may advance to the regional competition held at Texas A&M approximately three weeks later. Note that the Medina Valley Robotics club has been very successful in the past and has participated in the regional competition the last four years. In addition to building the robot there are numerous other activities that the members should participate in.

To be a member of the Medina Valley Robotics club team members are asked to participate a significant number of hours during the fall. A combination of meeting attendance and hours to accomplish other tasks will be used to establish your participation level. There are meetings held three times a week: Tuesday at 6:00pm, Thursday at 6:00pm, and Saturday at 1:00pm. Meeting last approximately two hours. Members are asked to commit to attending at least two meetings a week. If a member wishes to drive the robot in competition and participate in the regional event, additional time is required. The table on the next page is a breakdown of the minimum commitments required to be a member and be a driver during the first six weeks of the competition period.

Based on your commitment during the competition period, we are sure that you will also be interested in continued participation throughout the school year. The following are the activities open to participation by members of Medina Valley Robotics club. The "pie chart" identifies the relative level of effort required in each area. Note that this program includes a wide variety of tasks that can be enjoyed by students with all backgrounds and interests. This is a fun activity that has a lot of aspects but to get anything out of it you need to be committed.

	Member	Regional Participation	Driver
Kickoff and Subsequent Brainstorming	6 hours	6 hours	6 hours
Meetings over six weeks	24 hours	24 hours	30 hours
Additional Activities Based on Completion of Assignments in the Tasks Identified Below	12 hours	18 hours	26 hours
SA BEST Competition	6 hours	8 hours	10 hours
Preparation for and Participation in Regional Competition		TBD	TBD
Total over Six Weeks	**48 hours**	**56 hours**	**72 hours**

Medina Valley Robotics Tasks

Build Robot – The objective is to design, fabricate, and test a robot to efficiently perform the tasks necessary to play the game. This includes design and analysis that results in drawings, prototypes, and a notebook that demonstrate the design process and all functions of the robot. It also includes the production of prototype parts to demonstrate functionality. The final product is a robot constructed out of kit materials completed in sufficient time to allow for testing and driver practice. This group must continue to maintain the robot through game day. Both mechanical and electrical designs are part of the process.

Notebook – The objective is to produce a notebook that documents the activities of Medina Valley Robotics. This is a technical notebook that covers all aspects of the program with an emphasis on the engineering process. It includes written text, drawings, calculations, photographs, notes, etc. that reflect the activities performed. The notebook is primarily directed toward the requirements of SA BEST, but it should also be adaptable to the requirements of Texas BEST.

Team Strategy – The objective is to develop a team strategy to win at SA BEST, including both the game and the BEST (demonstration of application of the engineering process) portions. Game strategy will look at both the rules of the game and the robot design developed. BEST strategy will look at the entire breadth of the engineering process.

Spirit – Promote the activities of the Medina Valley Robotics to the community. This includes activities throughout the school year with an emphasis on game day activities.

Website – The objective is to develop and maintain a website to document the activities of Medina Valley Robotics. This site will be updated on a weekly basis during the course of the six-week competition and a monthly basis during the remainder of the year.

Getting Sponsors – The objective is to acquire support of the local community in terms of donation of services, supplies, and money. Community and school support is a vital part of the program. Sponsors will be recognized on the web page and receive copies of the newsletter. In addition a thank you letter will be written at the completion of the competition to inform them of the results of their efforts.

Newsletter – The objective is to provide a newsletter that communicates the activities of Medina Valley Robotics to the team members, school, sponsors, and community. This newsletter will be published on a weekly basis during the course of the six-week competition and a monthly basis during the remainder of the year.

Demos – The objective is to provide demonstrations to groups that are interested in Medina Valley Robotics. This includes demonstrations to schools, sponsors, and community groups. The objective is to promote the ideas of BEST through a wider community.

Fundraising – The objective is to raise funds for the activities of the club. This activity will primarily be carried out during the school year when the competition is not active.

Meetings – The objective is the get **all** the members of Medina Valley Robotics together to accomplish the tasks required. Meetings are scheduled three times a week during competition, and members are expected to attend and actively participate in the meetings. Action items (i.e. homework) that have been assigned must be completed prior to meetings.
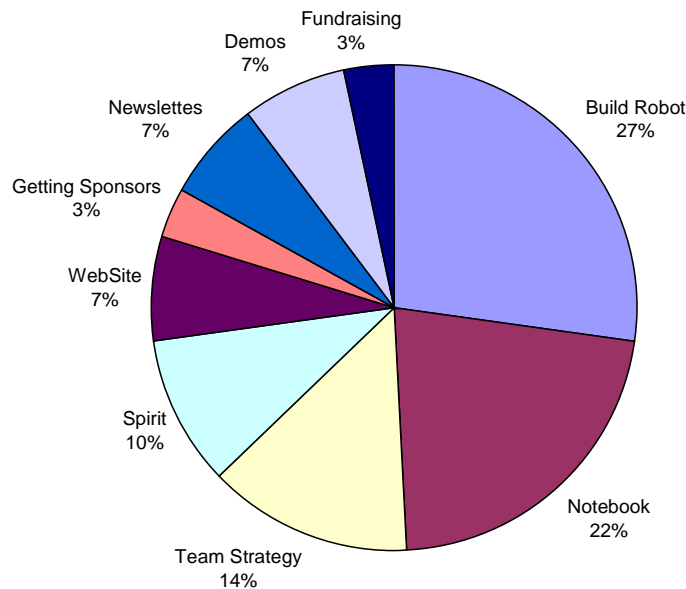
Medina Valley Robotics Club
Participation Agreement

The students will receive a commitment from the teacher sponsors and the adult mentors to assist them in participation in this program as outlined in the syllabus. As an outcome of this program, your student will be exposed to an academic-based technical competition in which they can further develop skills in science, engineering, technology, teamwork, problem solving, project management, pride in task completion, technical writing, and communications.

After you have read this agreement, please sign and return this page to Mr. Bollinger who is the team sponsor. You may keep the remainder of the document for your future reference._____

I have read and understand the above material and agree to abide by the terms contained within.

Students Name (Print) _____

Students Signature _____

I have discussed the participation requirements with my child and agree to support their program participation in any way I can.

Parents Signature _____

Date _____