



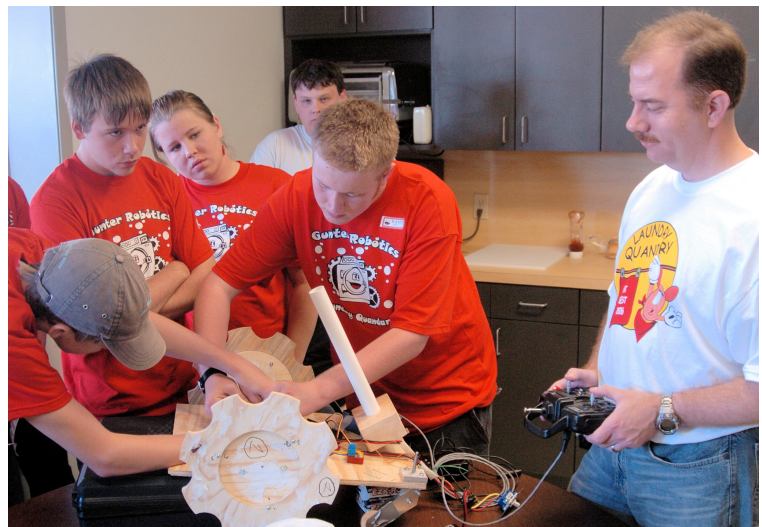
BEST Mentorship: Why it Matters

Students need mentors. Everyone knows that.

But BEST students need mentors in a different way. They need adults who will guide them to:

- look at a problem from several different angles
- brainstorm solutions to solve the problem
- select the best solution
- solve the problem

They need your help.



“But I don’t know anything about robotics,” you say. Neither do these students. Together, you and they will have six weeks to figure it out.

You’ll help them take plywood, PVC pipe, and a box filled with items such as screws and other hardware, an irrigation valve cover, piano wire, an aluminum paint grid, a bicycle inner tube, and something called a micro-energy chain system, and design a functioning machine that can perform certain, specific tasks in three minutes.

And you will not only have helped guide these students, but you will have impacted their lives...and your own.

Each fall for the last 20 years, BEST Robotics has been providing students—and adults—a remarkable experience: designing and building robots that compete in a game. Its purpose? To get middle through high school students interested in and excited about engineering, science, and technology. The students think they’re just building a robot. Those of us who do BEST know that what they are really doing is building both confidence and competency and likely figuring out what they want to be when they grow up.



Why is this so important?

Ask any manufacturer or industry leader about the critical need for a technologically literate workforce and they'll tell you about a crisis they're either facing now or will be facing in the near future. There aren't enough skilled workers to fill all of the jobs. The baby boomers are retiring at record rates and there isn't a pool of qualified candidates to fill their positions. And there doesn't appear to be a clear solution to solving this crisis.

So here's where you and/or your company come in. **You can be part of the solution by volunteering your time this fall to help mentor a BEST team of students.**

You don't have to be an engineer, scientist, or technician. You don't have to have a college degree. You don't have to have a child in school.

Anyone can be a BEST mentor—male, female, mom or dad, employed or retired, skilled with tools or not, it doesn't matter. **You just have to be willing to give of your time and energy.**

The spirit of BEST is to guide students to discover their own solutions, so we expect students to build the robot, not you. **You will be a resource, catalyst, facilitator, idea generator, and problem-solver, but not a person with answers. Your role is not to tell students what to do or how to do it. You'll contribute ideas or suggestions, not as a sage, but as a collaborator.**



Here's how BEST works.

Typically, a science, math, or technology teacher or two make the commitment to sponsor or coach a BEST team of students from their school. Mentors

commit to helping the teachers organize and manage the six-week long design and construction phase of the competition. At the conclusion of the six weeks, teams come together on "Game Day" (usually at a local school gymnasium) and race their robots against each other in a head-to-head competition. The race is a three-minute match with four robots competing at once, each trying to accomplish some robotic challenge. Different challenges carry different points, so the team that scores the most points wins.



Each year the game changes. It is kept a secret until Kick Off Day in early September, at which time the playing field and game rules for the year's game (the robotic challenge) are revealed. On that day, teams receive two kits: one kit contains the equipment used to power the robot and the other kit contains the raw materials from which the students build the robot. Only the materials provided can be used, and the robot cannot weigh more than 24 pounds and must be able to fit inside a 24" square cube. At the conclusion of Kick Off Day, the competition officially begins.

Six weeks later is Game Day, the game itself. It's been described as being **part basketball game, chess match, and science fair all rolled into one day, with cheerleaders, mascots, pep bands, and wildly cheering adults and kids mixed in.**

So, how much time will be required, you ask.

That depends on how motivated you and your students will be to do your "BEST." We've found that competitive teams meet 3-4 times a week for several hours at a time. **Ideally, six mentors per team reduce individual time requirements.** They can rotate times and spread out when they need to be present. We suggest you find more mentors to help you - the more the better!

What makes this different from other activities for which you can volunteer?

Instant feedback. In six intense weeks, students go from a blank look when they see the jumble of parts in the kit, to solid confidence knowing that they worked as a team, solved a major problem, and received the heartwarming endorsement of their adult mentors. **The change is stunning and one you'll never forget.**