



## Boosting Engineering, Science, and Technology

Capitol BEST is a group of engineers, teachers, parents and industry technologists in the Austin area that have joined together to inspire and motivate students towards studies and careers in engineering, science, and technology through a **sports-like technology contest**. A team of students from your school is assisted by a small group of technology coaches from local industry for a six-week period to design and build a radio-controlled machine to accomplish a defined task.

The technology contest is designed to simulate a real-world business and engineering environment. The teams gather at game kickoff day, are shown the game field, and are given:

1. **The time period of the contest.** The game is limited to a six-week period to simulate a product time-to-market constraint. In the real world, a late product doesn't sell. In the game world, a late product means that you don't compete.
2. **The resources for the contest.** Each team is given an identical box of odd parts, fasteners, materials, a radio controller, motors, and servos. In the real world, a new product must be built within a cost budget. In the game world, the machine can be built only with kit parts.
3. **The specifications for the contest.** At kickoff, a detailed game task description will be given to each team. This description is the most closely held secret in the process, known only to a select few Texas BEST game designers before the kickoff. In the real world, a new product must meet the customer's requirements and specifications. In the game world, the machine must meet size and weight requirements while still completing the game task.

Engineers from local industry, as well as parents and other interested individuals, act as mentors for their school's team, to guide the students through a product design, prototype, build-and-deliver sequence. Each school is typically assigned 2-3 mentors. Mentors are encouraged to participate in student brainstorming sessions but the students remain the primary decision makers as they design and build their machines. Much more learning is accomplished by letting students discover their own mistakes and successes.

The schools provide classroom/shop access after school hours, transportation to contest sites, and at least one teacher sponsor for administrative support much like a UIL-sponsored academic contest. Student participation is decided by the school, but we hope to offer the experience to all students, regardless of background.

Teams are rewarded in many ways. Trophies are given to the top four finishing teams and the team with the best increase in school awareness of engineering, science and technology. Awards are also given to teams whose machines display the most elegant design, most unusual design, and the most robust design. The top winners from each regional competition are invited to the regional contest, Texas BEST, to be held at Southern Methodist University in Dallas.

Through BEST, students are exposed to a real-life hands-on experience that they will never forget. They will learn important skills such as teamwork, project management, technical writing, and general design concepts that will help them in the future, no matter what career they finally choose, technical or non-technical. Their participation in Capitol BEST is an excellent activity to list on a resume.

For more details, or to sign on to this exciting Capitol BEST activity, contact your school's team sponsor

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*for additional information visit the Capitol BEST website at <http://www.capitol-best.org>*