

FIRST Robotics Team 1640
Downingtown Area High Schools

Mission

To inspire and educate pre-college students within the greater Downingtown Area school district in science, technology, engineering, and mathematics through hands-on experiences with robotic technology. Build knowledge, an understanding of planning and project management and life skills (especially gracious professionalism, team work, effective communications, cooperation and leadership). Promote expansion of this program both within and beyond the Downingtown District.

Activities

Build Season is the heart of Team 1640's year. This is the 45 calendar-day period between kick-off (at which the new game/competition/objectives/rules are announced) and day a working robot must be shipped for competition. During this 45-day period, the team must:

- Brainstorm and decide on their game-play strategy
- Develop any physical data needed
- Propose solutions to the strategy
- Prototype and test these solutions – revise and retest as needed
- Define mechanical, control & electrical specifications
- Design the Robot – using 3D CAD
- Develop the control software
- Build the Robot
- Test & debug
- Develop tactics
- Train drivers & operators
- Learn
- Keep safe
- Have fun

Following the Build Season, the team and robot compete, to see which robots and teams best meet the competitive challenge.

Off-season, the team remains active. We:

- Continue to compete with local teams in off-season competitions
- Develop knowledge. Each year, we pick areas where we feel we need to learn and we do so. We research. We build prototypes. We test them. We analyze the results. We build knowledge. We develop provisional designs based on this knowledge. Last year, we selected drive-train technology as our target, so it is no big surprise that our Innovation Award was based on our drive-train design.
- Recruit new students
- Recruit new mentors

- Train new students and mentors through a series of lesson and hands-on seminars
- Support the community
- Provide both adult and student mentors to support the VEX teams
- Provide experienced assistance to VEX events
- Support our sponsors and let them know what we've done
- Recruit new sponsors
- Raise funds
- Learn
- Keep safe
- Have fun