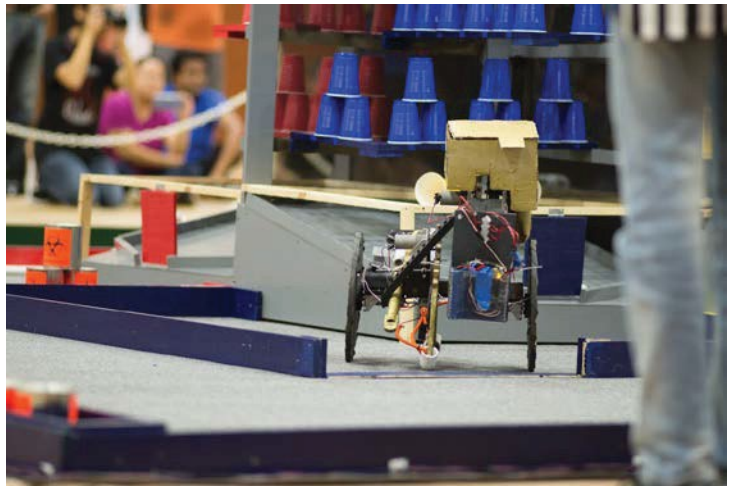
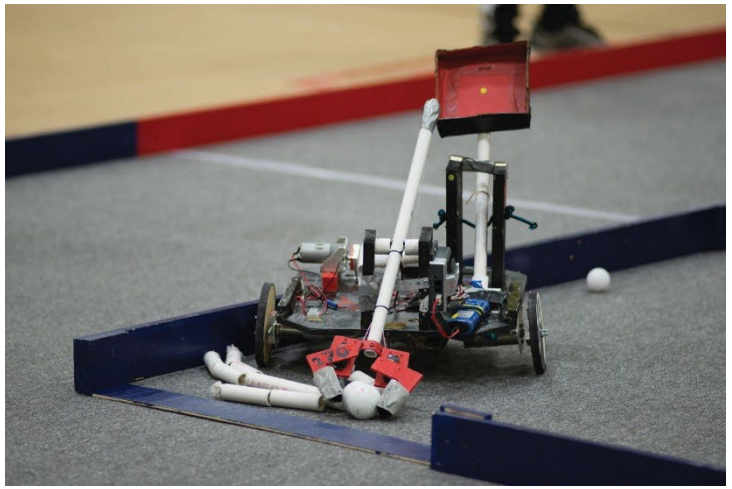
BEST ROBOTICS

BOOSTING ENGINEERING SCIENCE & TECHNOLOGY

Competition Overview





Competition Overview

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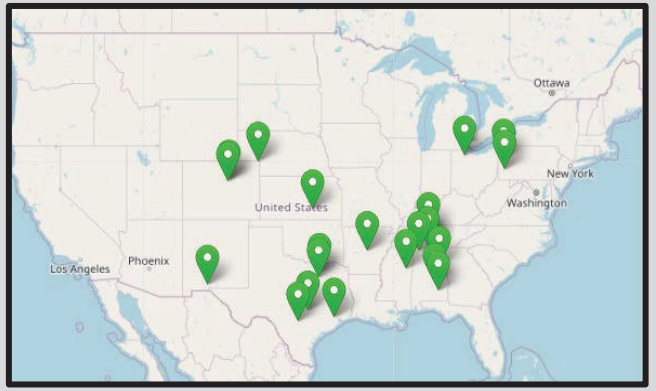
- Hub Level Competition
  - Held in local community/geographic area
  - Hubs follow the same rules, schedule & kit materials
  - One to Two-day event
  - Teams advance to a Regional Championship based on Hub performance
- Regional Championship
  - Competition between winners of Hub Level competitions
  - Two to Three-day event

Hubs



Championships

Competition Characteristics

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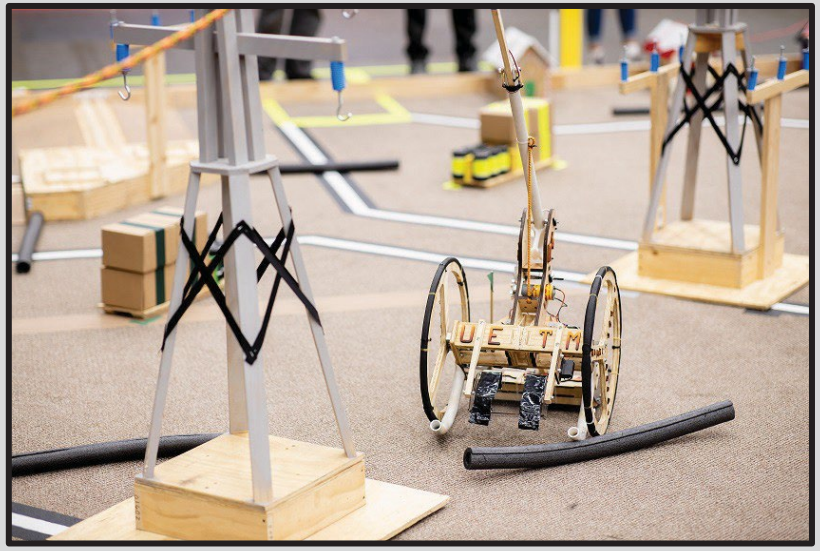
- Common Characteristics
  - No registration fees or equipment (kit) costs
  - Open to Intermediate, Middle & High Schools
  - Public, Private, Charter, Homeschools, Boys & Girls Clubs, and After School Programs
- Consistent and Educational
  - Same rules, same kit, same schedule
  - Emulates real-world product development
    - Design to Cost, Design to Function, Time to Market
  - Help solve an industry or global problem
- One team per school
- No limits on team size, student age
- All teams compete against one another



Competition Schedule

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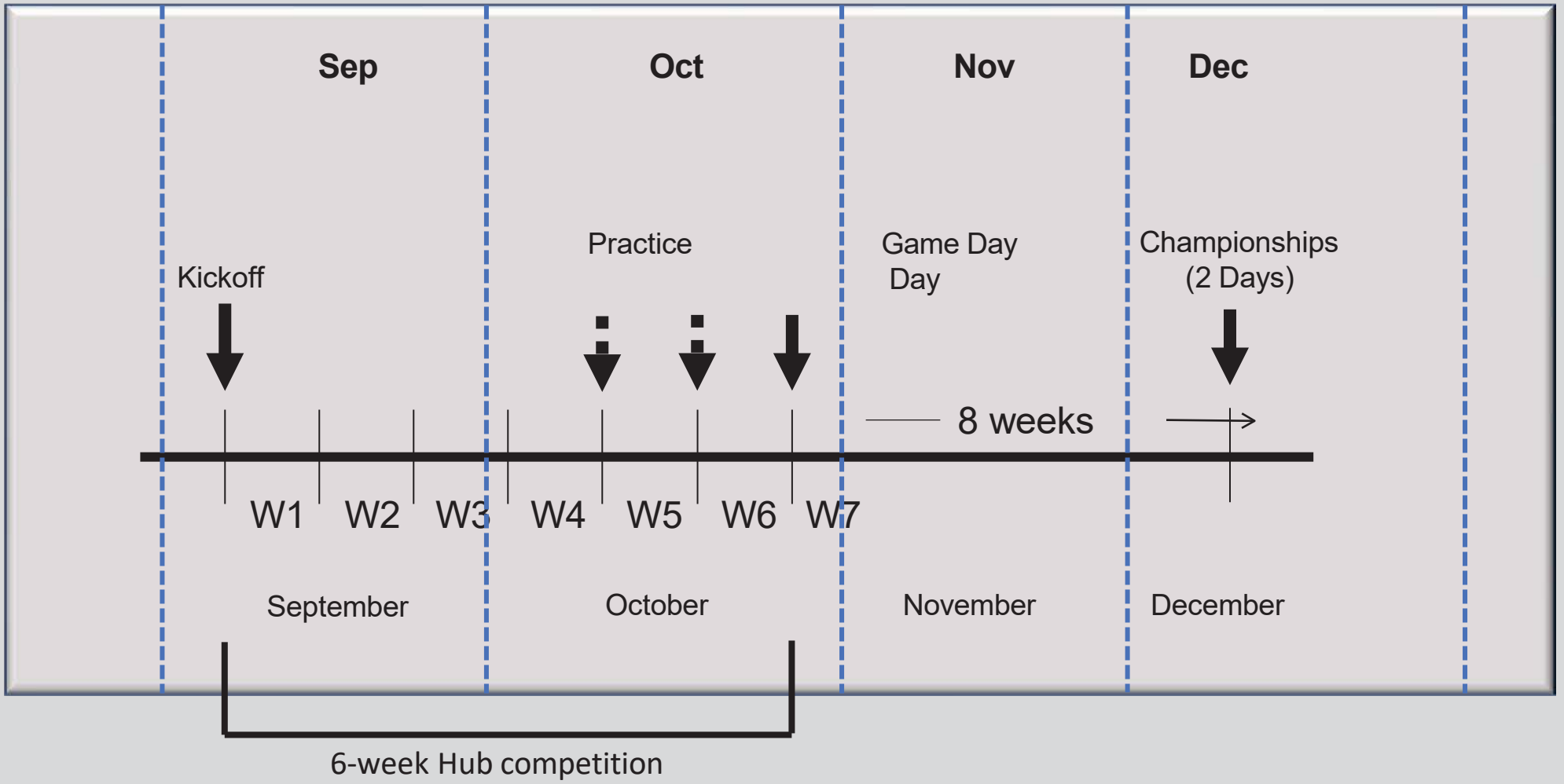

BEST Events

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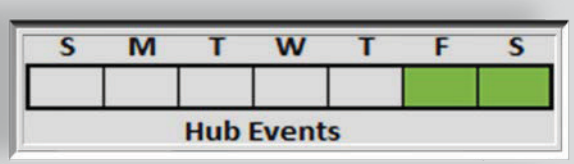
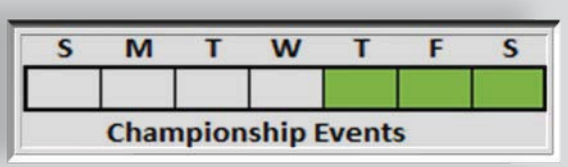
- Kickoff Day
  - Unveiling of game, rules and judging schedule
  - Distribution of Kits
- Practice Day
  - At least one practice day on the game field
- Game Day (1 days)
  - Head-to-head competition & BEST Award judging
- Championship (2-3 days)
  - Top teams in head-to-head and BEST Award advance
  - Game Day among championship teams

Typically Weekend Events





Emphasis is on a complete Product Development

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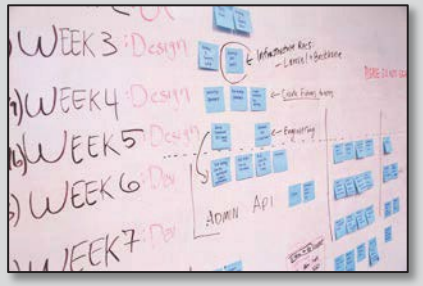
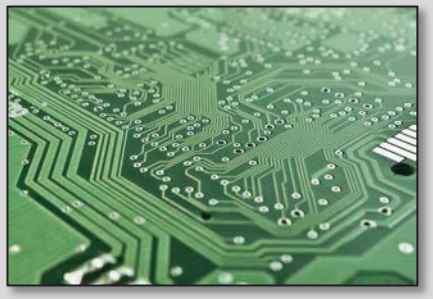
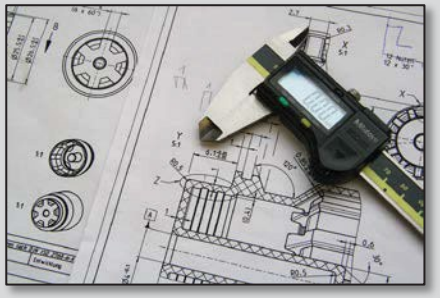
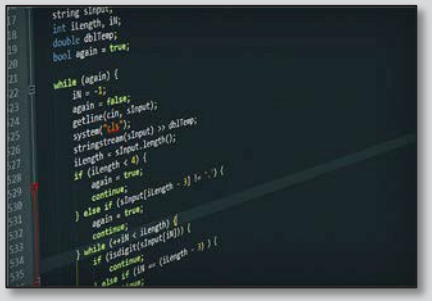
There are many design disciplines involved in a successful product development.









Product Development Disciplines

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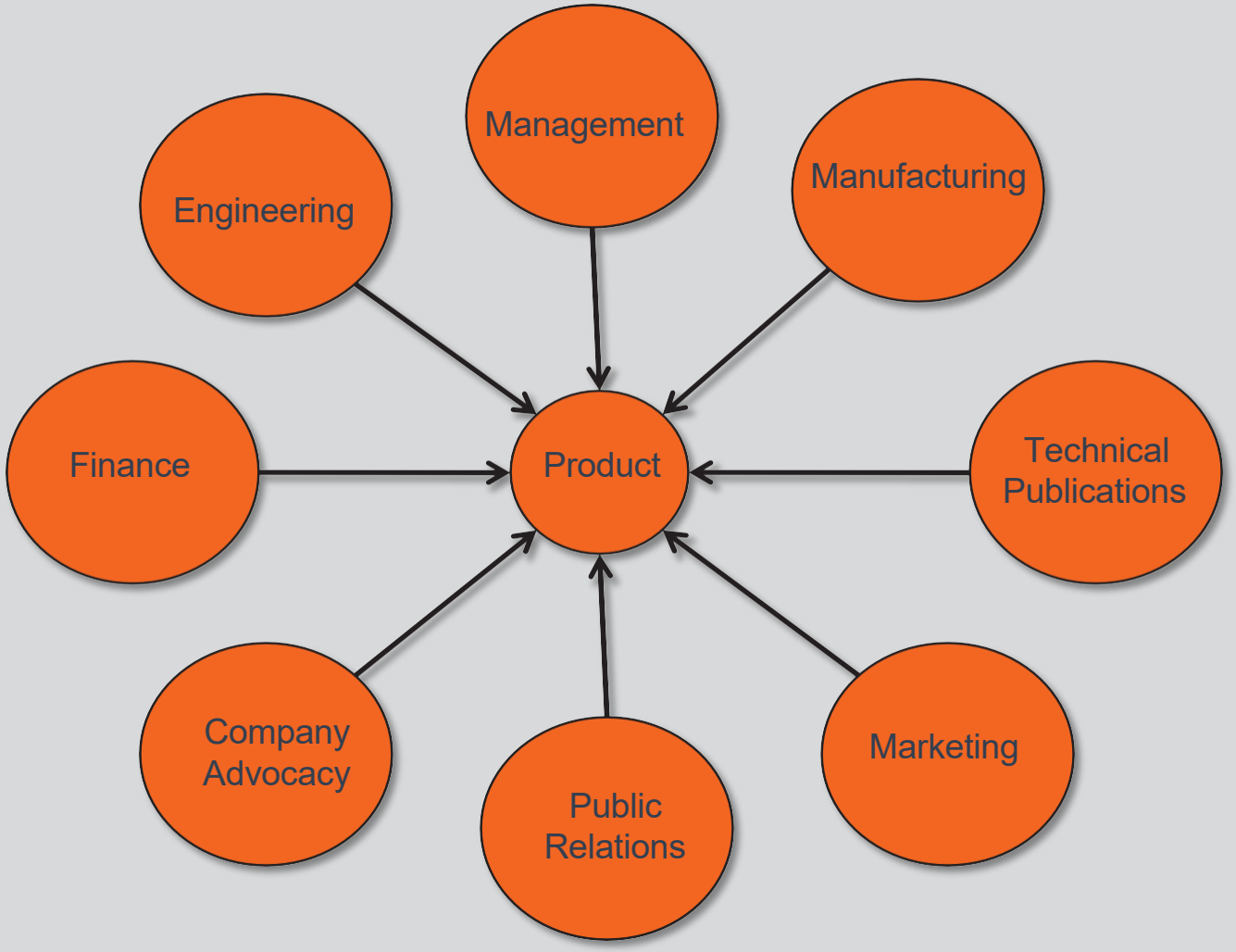

In The
REAL WORLD

Product Development Disciplines

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BEST emphasizes each of these design disciplines during the competition

Product Development Disciplines

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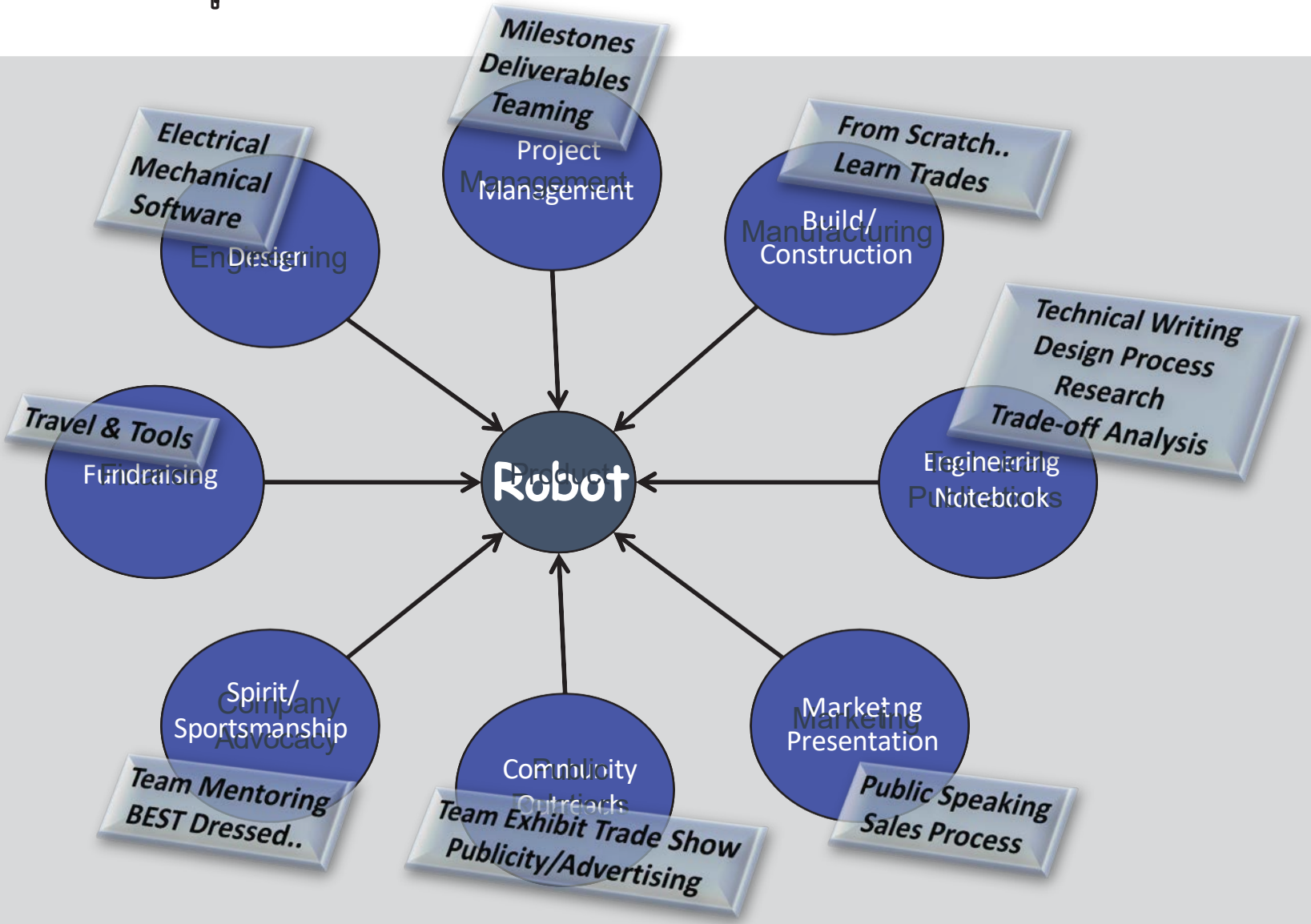

In The
REAL WORLD

In The
BEST WORLD

Head-to-Head Competition

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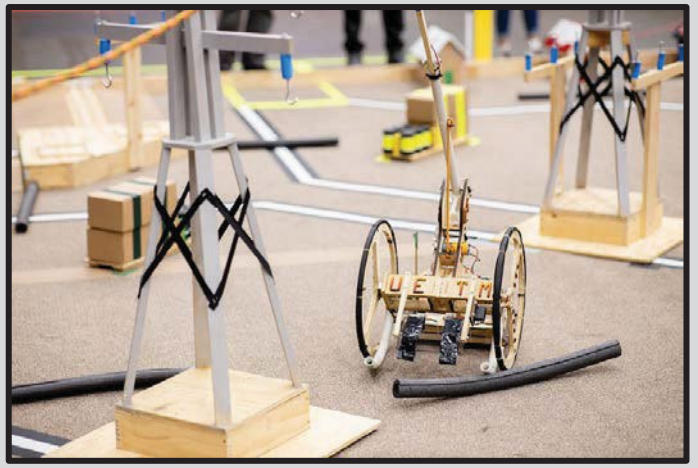
- New educational theme/challenge and game field each year
- Challenge and field kept secret until Kickoff Day “unveiling”
- Playing field is typically 24’ x 24’ configuration
- Points awarded for successful completion of tasks
- 4 teams compete in 3-minute matches
- Progression
  - Round robin seeding phase (6-8 matches per team)
  - Wildcard phase (best remaining notebook scores)
  - Semifinals phase (8 or 16 teams)
  - Finals phase (4 teams)



Judged Activities
BEST Award

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- Teams compete in the following required categories
  - Engineering Notebook
  - Marketing Presentation
  - Team Exhibit
  - Spirit and Sportsmanship
  - Robot Performance

- The BEST Award
  - Best overall score in all 5 categories

- Additional Design Awards
  - Most Robust Design
  - Creative Design
  - Simulink Design Award

Industry Design Tools Available

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Robotics "Kit" is Provided

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- Returnables Kit
  - Loaned to the school for the duration of the competition
  - Electronics equipment used to power the robot
  - Microcontroller, motors, servos, batteries, sensors, wiring, etc.
- Consumables Kit
  - Expendable raw materials provided to the school
  - Materials used for construction of the robot structure
  - Plywood, PVC, metals, hardware, fasteners, miscellaneous

Basic Design Constraints

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- Teams may only use the materials and quantities provided in the KIT!
- Only two team custom parts may be used
- Final robot must be no larger than 24” x 24” x 24”
- Final robot must weigh no more than 24 lbs.
- Parts, size, weight, and methods are verified prior to Game Day

Student Expectations

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- Engineering Design Process
- Design & Construction
- Programming
- Driver-controlled and Autonomous Performance
- Documenting the design
- Marketing the design
- Publicizing BEST Robotics, the team, and the design

Annual Training

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- Workshops and Webinars on various topics
- Technical and non-Technical training
- Students, Teachers, and Mentors
- BEST Training Calendar
- BEST Education Courses

BEST National Registry

https://registry.bestrobotics.org

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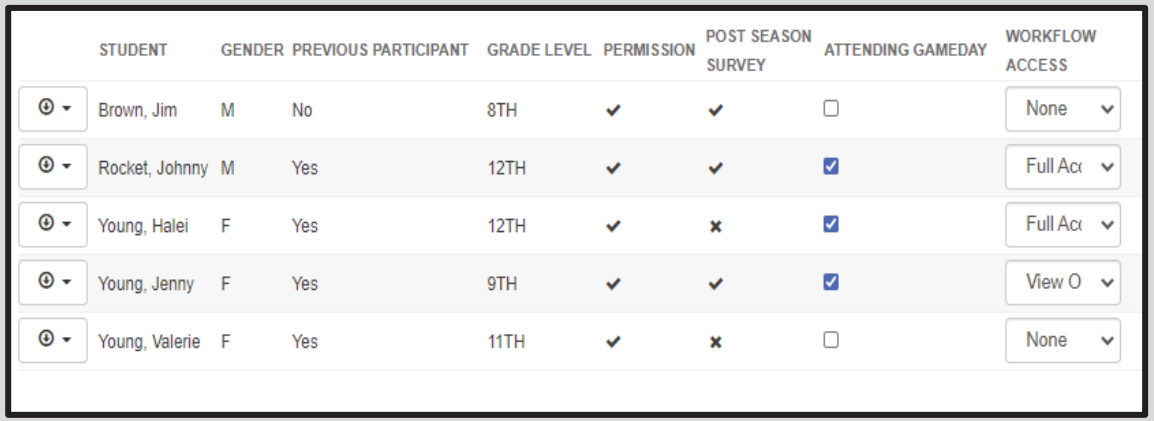
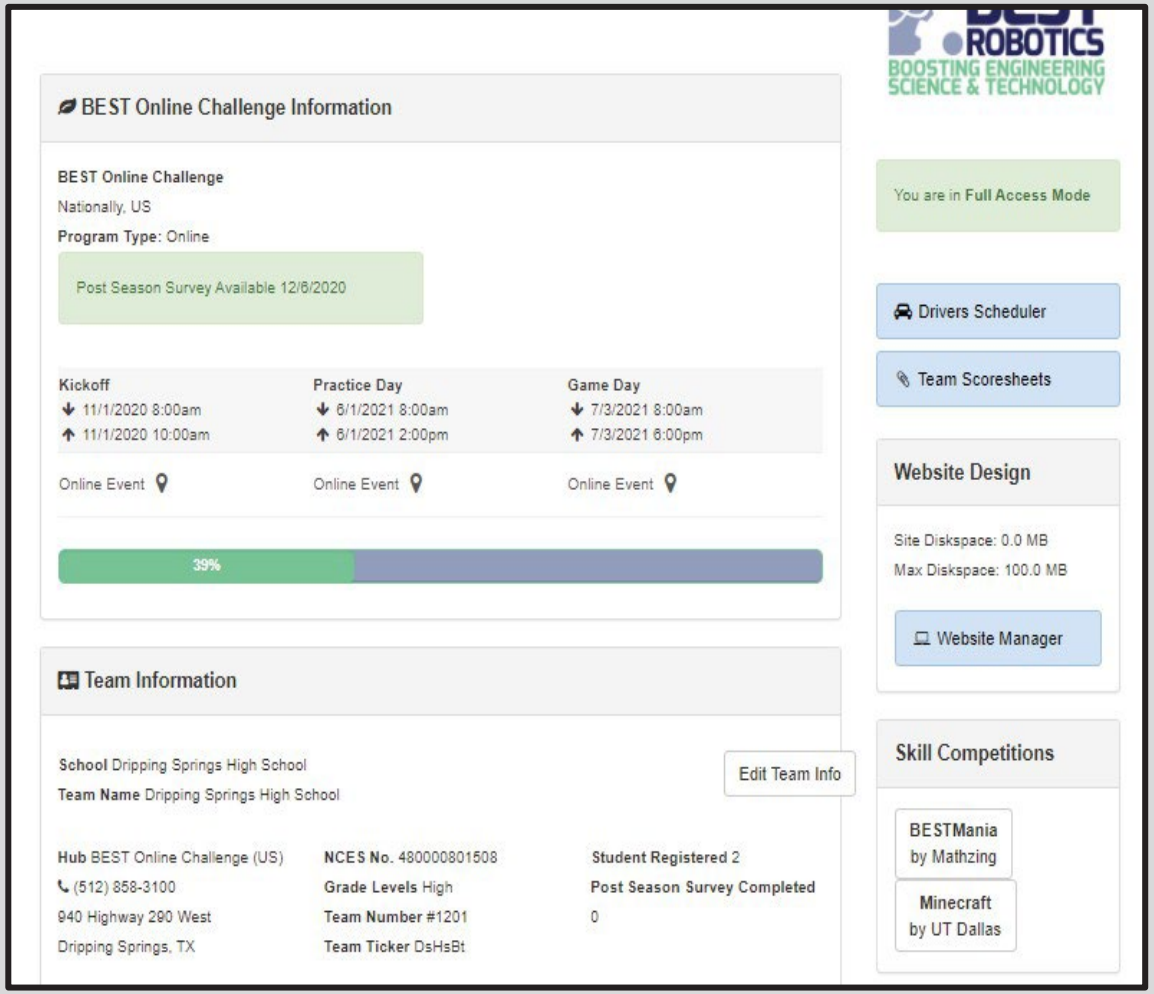
- Team Registration
- Participant Registration
- Competition Management
- Team Management & Access
- National Demographics, Surveys



	STUDENT	GENDER	PREVIOUS PARTICIPANT	GRADE LEVEL	PERMISSION	POST SEASON SURVEY	ATTENDING GAMEDAY	WORKFLOW ACCESS
	Brown, Jim	M	No	8TH	✔	✔	☐	None
	Rocket, Johnny	M	Yes	12TH	✔	✔	☑	Full Ac
	Young, Halei	F	Yes	12TH	✔	✘	☑	Full Ac
	Young, Jenny	F	Yes	9TH	✔	✔	☑	View O
	Young, Valerie	F	Yes	11TH	✔	✘	☐	None



What Next?

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- Become a Sponsor
- Register a Team
- Mentor a Team
- Volunteer
- Find an Event

https://registry.bestrobotics.org