Evergreen Field

Provided for the 2021 At Home Challenge: Game Design Challenge
Playing Field

- The playing field contains “evergreen” elements (elements that are reused year-to-year) that can be assembled in different configurations to change the shape, length, and width of the field.

- Aside from the Truss, side borders, and player stations, FIRST does not keep Game/Year Specific field elements from previous years.

- A basic field set up is provided in the Game Design Challenge Evergreen CAD Package (zip folder).

Typical configurations include:
- Removing a section of the Side Border
- Rearranging the Side Border pieces to change where the Gate is
- Rearranging Alliance Wall layout
  - Connecting Player Station to Player Station
  - Connecting Player Station to Side Border
  - Inserting frames that can connect to Player Stations or the Side Border
- Modifying non-Player Station components of the Alliance Wall to angle the corners of the field
Examples of different field configurations
archive game documentation, including field drawings

2020 – INFINITE RECHARGE<sup>SM</sup>
• Alliance Wall has angle corners
• Player Stations separated by a Loading Station and Goal
• Side Border removed 1 section (length was made up by angled Alliance Wall)
  • Gates were very close to the Alliance Wall

2019 – Destination Deep Space Presented by The Boeing Company
• Alliance Wall is perpendicular to the side border
• Player Stations are together with Loading Stations on the sides
• Side Border was “nominal” length
  • Gates were spaced out from the Alliance Wall
Examples of different field configurations
archive game documentation, including field drawings

2018 – FIRST POWER UP℠
- Alliance Wall has angle corners
- 2 Player Stations were together, the remaining Player Station was separated by the Exchange
- Side Border removed 1 section (length was made up by angled Alliance Wall)

2017 – FIRST STEAMWORKSTM
- Alliance Wall has angle corners
- 2 Player Stations were together, the remaining Player Station was separated by the Overflow Loading Station
- Side Border removed 1 section from the Boiler side of the field & 2 sections from the return Loading Station side (length was made up by angled Alliance Wall)
Additional Evergreen Components

- Truss: (CAD models provided)
  - 4’ Length (~121 cm)
  - 5’ Length (~152 cm)
  - 12’ Length (~365 cm)
  - 3- or 4-sided, 1’ Cube Corner Blocks (~30 cm per side)
  - Single or Stack Cheeseboroughs (pipe clamps)

- Tape:
  - FIRST typically uses 2” wide, 3M™ Premium Matte Cloth (Gaffers) Tape
Helpful Models: Humans

CAD Source: GrabCAD (user: mcramblet)

Note: The human models are complex and may slow-down opening/manipulating your model

Man – 5’ 11 3/4” (~182 cm)

Height is approximate, measured from bottom of shoes to top of hair

Woman – 5’ 3 1/8” (~160 cm)

Height is approximate, measured from bottom of shoes to top of hair

Front Plane: Bottom of feet

Top Plane: (shown) approximate middle of person – front to back

Right Plane: approximate middle of human – shoulder to shoulder
Helpful Models: Basic Kit of Parts Robot

Note: The full Kit of Parts Chassis from AndyMark are complex models and may slow-down opening/manipulating your model.

- **Long Kit Bot with Bumpers** (shown with orange bumpers)
- **Wide Kit Bot with Bumpers** (shown with green bumpers)
- **Square Kit Bot with Bumpers** (shown with yellow bumpers)

Flat faces have been added to the bottom of the center wheels for easy mating to the Carpet.